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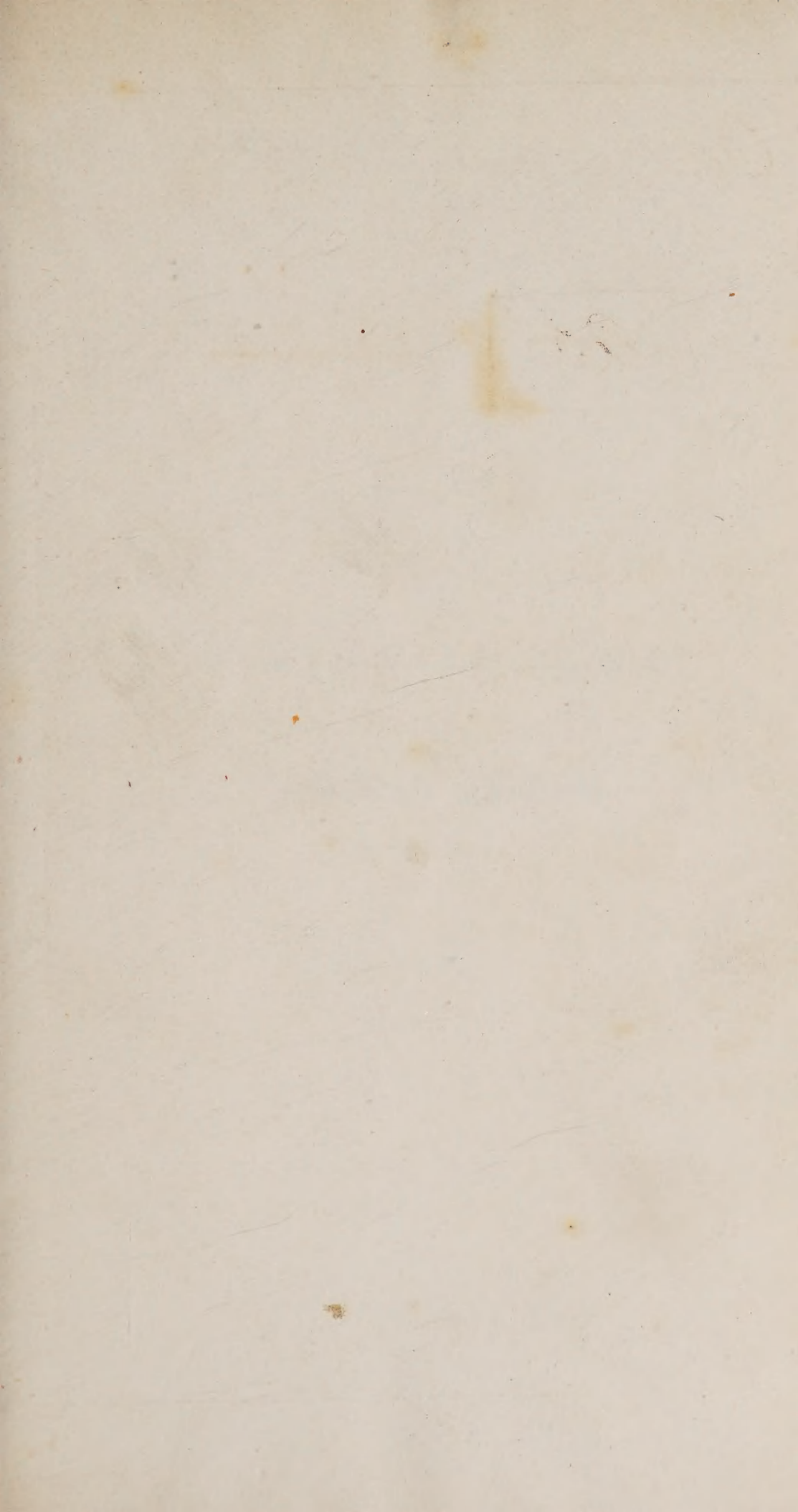
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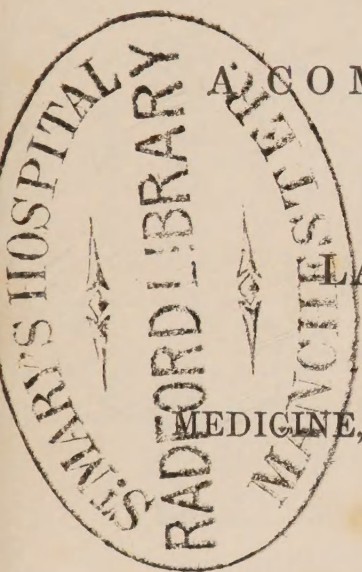
A COMPREHENSIVE VIEW

OF THE

LATEST DISCOVERIES

IN

MEDICINE, SURGERY, AND THE COLLATERAL  
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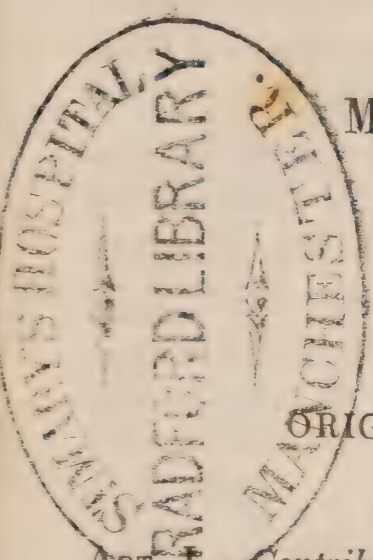
OF

MEDICAL SCIENCE,

MARCH 1, 1844.

PART I.

ORIGINAL COMMUNICATIONS.



ART. I. — *Contributions to the Diagnosis of Empyema, with Cases.* By ROBERT L. MAC DONNELL, Licentiate of the Royal College of Surgeons, Ireland ; Demonstrator of Anatomy in the Medical School, Park-street.

THERE is not, perhaps, a subject connected with the progress of modern medicine more remarkable than the fact, that the sources from which the diagnosis and treatment of some of the most important diseases are derived, have had their origin from one or two isolated but well observed examples of these particular affections. And in some instances, no doubt, they were recorded, rather as being curious and interesting in themselves, than with the expectation that they would throw light upon the obscure class of diseases to which they belonged. Thus, for instance, our knowledge of the diagnosis of Abdominal Aneurisms, dates from the publication of the case of Mr. M. recorded by Dr. Beatty ;\* we knew nothing of the *positive* diagnosis of Pericarditis

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\* Dublin Hospital Reports, vol. v.



previous to the appearance of Dr. Stokes's paper on the subject,\* though Collin and Latham had previously mentioned the very signs upon which the diagnosis is founded. We were equally ignorant of the symptoms and signs peculiar to Cancer of the Lung until Dr. Graves† recorded his interesting case. Our familiarity with diffuse inflammation, phlebitis, and that particular category of affections, commenced with Dr. M'Dowel's‡ memoir on Purulent Periostitis; and our knowledge of the phenomena of Glanders in the human subject had its commencement in Dr. Elliotson's§ paper. Many more examples might be quoted in illustration of this view, and it is to be hoped that the cases I am about to detail, will form the nucleus, around which others of a similar nature will be gathered, so as to constitute an additional feature in the diagnosis of thoracic affections, particularly those presenting the symptoms of Empyema or of Encephaloid disease of the lung.

The opportunities I have possessed, both as a student and practitioner, for some years past, of investigating chest complaints, have been very considerable; and for a great portion of that time I have been engaged as clinical assistant to my kind friends, Drs. Graves and Stokes, in the medical wards of the Meath Hospital, where, in the practice of the former gentleman, many of the cases occurred, upon which the observations to be met with further on, were instituted, and I am indebted to his well-known liberality for permission to lay them before the profession. As these observations are not based upon theory supported by ingenious argument, but are the result of careful *bed-side* investigation, it is hoped that their claims to be considered as "contributions to the diagnosis of empyema" will be submitted to the same test.

Though I am well aware of the great inconvenience arising from the introduction of new names into medicine, and from

\* Dublin Journal of Medical Science, vol. v.

† Ibid. vol. iv.

‡ Ibid. vol. iii.

§ Med. Chir. Transactions, vol. xvi.

the frequent changing of those already in use, yet I do not think that any other would accurately convey an idea of the nature of the three first cases than that of “Pulsating Empyema of Necessity,” which both expresses the great peculiarity of each, and with the exception of the word *pulsating*, is merely the revival of a term, which until very lately was employed to express the bursting of an empyema outwardly.

CASE I.—*Pulsating Empyema of Necessity. A large Tumour appears in the Cardiac Region, which after pulsating for some time, becomes red, tense, and shining, and then bursts, giving Exit to large Quantities of Pus; Death; Post Mortem.*

A woman, aged 28, of dissolute and abandoned habits, was admitted into the Meath Hospital Sept. 6. It appeared from her statement that she had been labouring under symptoms of acute pleuritis for two months, for which she was actively treated. When admitted she was greatly emaciated, suffered from pain in the left side a little below the mamma; she had cough, with bloody streaks through the expectoration, and inability of lying on either side, decubitus being for the most part on the back. Her pulse was 108, small and weak. The *physical signs* were dulness of the left side, commencing a few inches below the clavicle, and extending downwards both before and behind; the left lateral region was likewise dull; total absence of respiration all over this dull portion; the upper part of the left side, both before and behind, was clear on percussion, with bronchitic rales accompanying the respiratory murmur. The lower half of the sternal region was completely dull, and here the sounds and pulsations of the heart were more intense than in any other situation. The whole of the right side of the chest, both before and behind, sounded clear, and the respiratory murmur was loud, puerile, and free from rale. There was no dilatation of the side observed on her admission.

For the next fortnight there was very little change observed; on the 21st however the cough again became very troublesome;

and was accompanied by a copious muco-purulent expectoration, and her breath became intolerably foetid; pulse 106, weak and feeble; respiration 25, and very laboured. She complained of slight tenderness a little below the nipple, but there was no discoloration or œdema of the part. On the 26th a small tumour became perceptible, *every time she coughed*, in the situation of the pain; it was soft, and exquisitely tender to the touch, but not discoloured or œdematous. On the 28th, bronchitic rales were very intense in the right lung, and those in the top of left lung were much increased; the *expectoration had become quite purulent*. When she reclined to the left side the tumour became greatly enlarged, but receded when she lay on the right, and had a distinct fluctuation. On the 30th the tumour had extended considerably, and the expectoration was still *purulent, and very copious*. Pulse 108, and weak.

From the 1st of October till the 15th, she suffered severely from incontrollable diarrhœa, and was reduced to such a state that her stools were passed involuntarily. The tumour had greatly increased, and was now about the size of an orange, it was red, shining, and fluctuating, *and had a strong diastolic pulsation*, which did not convey the idea of being tilted forward by a pulsating body, as occurs in the case of tumours lying on arteries, but it was of an expanding character, and in every part the pulsation was equally strong. *Though frequently examined with the stethoscope the least trace of bruit de soufflet was never discovered*; nor had it the peculiar thrill so frequently felt in aneurisms. On the 21st she expectorated about a pint of green pus, and the bowel complaint received a notable check. The tumour was still more red, tense, and pulsating, and on the following day it burst, and gave exit to about three quarts of extremely foetid pus, and she became exceedingly weak. After the evacuation of the pus the sound on percussion assumed a clear tone. On the 24th the respiration in the right lung was again healthy, and free from rale. The tumour had receded, the respiration in the affected side was just audible, but



without rale. All the metallic phenomena, except *tinkling* and amphoric breathing, were present, and the sound on percussion was quite tympanitic. When the aperture was uncovered *a peculiar rustling or whistling noise was perceived at each inspiration. From this time she began to rally, her strength increased, the diarrhoea ceased, and the purulent expectoration diminished*, and she was able to sit up all day, the pus constantly trickling from the fistula which remained open, and for the next six weeks she had periodical discharges to the amount of two or three quarts every ten days or so. At last her strength again failed, the cough increased, the pulse became quick, but she remained free from sweating. The clavicle and spine of scapula of the affected side became gradually dull, accompanied with feeble respiration, mixed with crepitating rales. The day before her death, which occurred on the 15th of December, a discharge of nearly three quarts of green and foetid pus escaped from the fistula.

*Post Mortem Examination.*—The right lung was in every respect healthy, *not the least evidence of bronchial inflammation in any part of it.* On the left side of the chest being opened, the lung was found bound by adhesions to the ribs, for about two-thirds of the pleural cavity, and the remaining third i. e. between the compressed and shrivelled lung and diaphragm, was an empty cavity. The lung was also bound down to the spinal column by two strong bands of adhesion, and its inferior lobe was found red and carnified. The sac of the abscess passed behind the lung also, to a considerable distance; it was coated with a thin layer of organized lymph. The upper lobe of the left lung was the seat of numerous tubercles, beginning to soften, the anterior part of lower lobe was healthy, but the posterior, as before stated, was solid. The fourth rib was quite carious near its cartilage, and the sixth was in a similar condition, and the periosteum covering both was in a sloughy state. Externally the integuments around the fistula were separated for a couple of inches from the subjacent muscles. *The liver was enlarged to*

*nearly half its normal size, engorged and full of blood. The intestines were examined with the greatest care, but no trace of disease could be discovered.*

CASE II.—*Pulsating Empyema of Necessity; two Tumours appear in the lower Part of left Side, presenting Fluctuation and Pulsation; on being opened purulent Matter escapes in large Quantities; Death.*

About the middle of June, 1842, I was requested by my friend Dr. Graves to visit A. B., Esq. From the history of the case it appeared, that three years previously he was attacked with pain in the left side, cough, and difficulty of breathing. These symptoms he referred to influenza, which was then very prevalent, but as they continued longer than he expected, and left him in a weakened condition, he came up to Dublin, and placed himself under the care of Dr. Graves, who immediately discovered that he was labouring under empyema of the left side. He remained in town for some time, and appeared to be greatly improved, when urgent business obliged him to go down again to the country, where, from change of air, and perseverance in the treatment advised, his strength increased, his spirits became good, and he was so far recovered as to be able to follow his usual pursuits, which were those of a country gentleman, and even to engage in field sports. For the next two years his health was sometimes good and at others bad: the cough frequently returned, and the difficulty of breathing and pain in the side occasionally annoyed him. For these symptoms he often consulted medical men in his neighbourhood, but it does not appear that he made them fully acquainted with his condition, for the remedies employed consisted chiefly of simple cough mixtures; nor indeed were his habits such as to lead his medical attendants to suspect him labouring under serious illness, for, according to his own statement, he used to join in various amusements, particularly hunting, and frequently has *felt* the fluid moving in his chest when going over a leap. So

little was there in his appearance to excite alarm, that he succeeded in getting a medical certificate on one occasion, when it was necessary to have his life insured, for the examination was confined to the upper and front portion of his chest, and in this way his actual condition eluded observation. From that period till May, 1842, he enjoyed pretty good general health. He now began to suffer from many of the constitutional symptoms of phthisis, and was greatly alarmed by the appearance of two tumours on the affected side, which we shall describe more particularly farther on, and determined on coming to Dublin and placing himself again under the care of Dr. Graves. He was not long in town before I saw him, and his state was then as follows:—He was greatly emaciated, pale, and haggard; his pulse was quick and feeble; he suffered greatly from night sweats; he had a slight cough, without expectoration; difficulty of breathing, and inability of lying, except on the back. He was extremely nervous, and, in short, had all the usual symptoms of hectic, save diarrhœa.

On examining the chest, two large tumours were observed, one situated in the spot usually occupied by the apex of the heart; the other was situated posteriorly, and appeared between the tenth and eleventh ribs, about two inches from the spine. Both of these tumours were alike in the following particulars: they were large (about the size of a Seville orange), soft and fluctuating, not discoloured, but having a few large and varicose veins coursing about their bases. They first made their appearance in the intercostal space, and at the time I speak of, they both possessed a *strong diastolic pulsation*, quite visible, and as strong as that of an aneurism of equal size, but without bruit de soufflet or thrill. It was also easy to perceive that a communication existed between them, for by placing the hand on one, fluctuation could be felt when the other was tapped. The integument in the neighbourhood was not inflamed or œdematous, nor did he suffer any pain from handling the tumours or the parts in their vicinity. Previous to their first



appearance, he suffered considerably in the above-mentioned situations, from a constant pain, increased on pressure, or when the waistband of his trowsers was buttoned ; but this after some time diminished, and two small tumours, about the size of hazle-nuts, became perceptible, and soon attained the size above described. *At first they did not possess any pulsation*, nor was it until they were about the size of a turkey egg that this peculiarity was observed. So much as regards the tumours. The affected side was not at the time I saw him increased in size, when measured at a distance from the tumours, nor had it the well-known barrel shape so common in empyema. It was completely dull on percussion over its entire extent, except for about two inches below the clavicle in front, and to the middle of the scapular region behind. In these situations the respiration was loud, and free from rale, but in every other part of this side, it was completely absent. The heart had left its natural position (now occupied by one of the tumours), and was pulsating strongly and visibly to the right of the sternum under the corresponding mamma. There was no egophony or friction sound heard over any part of the diseased side.

In consultation with Mr. Cusack and Doctor Stokes, it was judged prudent to make an exploratory puncture into the front tumour, the result of which proved that it contained pus. The opening was now enlarged, and about a breakfast-cup full of matter drawn off, from which the patient experienced considerable relief, and the wound was then closed. For the next three or four days nothing worthy of note occurred. Mr. Cusack again saw him in consultation, and on this occasion the tumour at the posterior part of the chest was likewise punctured, and was found to contain pus of the same character as the other. He appeared but little improved, his hectic continued, and an irritative cough annoyed him, and at each cough a gush of matter took place from the tumour. The pulsation, though greatly diminished, did not altogether disappear, and was very perceptible even in the collapsed sac of the abscess.

The tumour in front, which had been punctured first, was now as large as before, and presented a pulsation quite as strong. and it was observed that pressure made on it, tended to empty that placed behind; poultices were applied for about one month, during which time it continued to discharge at least a large breakfast-cup full of good pus daily. The constitutional symptoms, which before were very alarming, now abated; his appearance improved; the pulse fell down to the natural standard; the sweating stopped; the appetite and general strength gradually increased; and his nights were passed without restlessness or uneasiness of any kind. The change in his appearance was not more remarkable than that which took place in the physical signs. The left side of the chest from the level of the cardiac region upwards, became less dull, though by no means perfectly clear, and from being void of respiratory murmur, now presented it, in a tolerably intense degree, accompanied both before and behind by a loud rasping frottement,—so intense, that the patient himself was quite conscious of its presence, and suffered considerably from it, at each inspiration. In a few days all this portion which I have this moment stated, remained rather dull, became almost tympanitic, and from the fact of a metallic resonance of the voice and cough, and Hippocratic succussion being likewise noticed, it might have given rise at first to the suspicion that the untoward accident of an opening into the lung had taken place, but he had neither the symptoms which characterize the sudden formation of a pneumothorax from perforation,\* nor those which indicate the bursting of an empyema into the lungs; so that it was clear, that the air which now occupied the place of the pus in the

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\* “The symptoms commonly observed are the following: ■ sudden, new, and violent pain, with a sensation as if something had given way, is felt in the lower portions of the side; followed by dreadful dyspnœa, suppression of expectoration, extreme anxiety and general collapse. In addition to these there may be loss of voice and impossibility of lying on one side.”—Vide STOKES on *Diseases of the Chest*, p. 528.

pleural cavity had entered through the external orifice. The heart, which was, as before stated, completely towards the right side, had moved to midway between the mammary regions, and its apex was beating behind the xyphoid cartilage. So far, every thing was going on well, when unfortunately his landlady put damp sheets on the bed in which he and his wife slept. The next morning he had all the symptoms of an acute attack of pleurisy of the affected side, pain, stitch, difficulty of breathing, acceleration of the pulse, and the physical signs of an extensive effusion were again manifested, and the discharge from the open abscess, which had been gradually diminishing, became again profuse.\* Under appropriate treatment these acute symptoms were relieved.

For the next six weeks I was in daily attendance on him, and I shall content myself with mentioning, that at the end of that time his health was so much improved that he could dispense with medical care, and was about to return to the country, when he was arrested for debt, and imprisoned in the Marshalsea. At this time the effusion was almost removed; the discharge from the posterior tumour had nearly ceased; the affected side was beginning to contract, and the inferior angle of the scapula was considerably tilted out. The sound on percussion was still somewhat dull, but the respiration was loud, and the heart occupied the space behind the sternum. The upper part of both lungs was examined with the greatest care, without discovering the least evidence of the deposition of tubercle, and as there was complete absence of pyrexia, a recovery, with of course the contraction of the side and the usual amount of deformity, was expected.

Before long, the confinement of a prison produced symptoms which but too clearly showed that phthisis had set in, and

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\* His wife, who slept in the same bed, was on the same day seized with symptoms of violent pleuritis, and notwithstanding that she was treated most actively from the commencement by Dr. Graves's advice, she died at the end of a week, with all the signs of extensive effusion into the left side of the chest, and pneumonia of right lung.



after a residence there of four months' duration, he was discharged to die of the disease. From the period of his arrest till his death he was attended by my friend Mr. Newland, who has kindly furnished me with full details of the course of the disease; but as these notes have already extended to a great length, I shall pass them over, merely mentioning that he suffered from hectic in all its varieties. His friends refused permission to make a post mortem examination.

By a strange coincidence, I had an opportunity, at the same time, through the kindness of Dr. Graves, of examining a somewhat similar case in a gentleman who had been twice under the care of that distinguished physician. I shall quote the history of his illness as published by Dr. Croly of Mountmellick.

*CASE III.—Pulsating Empyema of Necessity.—Two large Tumours appear in the lower Portion of the left Side of Chest, presenting Fluctuation and Pulsation. One of them is opened, and the Pus escapes in large Quantities; Death; Post Mortem.*

Case of — Jones, Esq. (abridged from Dr. Croly's account in the 8th volume of the "Medical Press," p. 138).

He had laboured under an attack of bronchitis, pneumonia, and pleuritis with effusion. The urgent symptoms were very much relieved, and he was enabled to resume his usual avocations; still, however, he suffered from febrile exacerbations at evening, and his pulse remained quick.\* A few months before I saw him his strength again failed, and his fever increased. The following, according to Dr. Croly, was his condition immediately before he came to Dublin. "There was palpable evidence of empyema. The side was obviously enlarged,

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\* Dr. Croly thinks the quick pulse was kept up by the unnatural position of the heart. In this view I cannot agree, for I have seen numerous cases in which the heart was under the right mamma, and yet the pulse was quite natural, and there were neither *bruit de soufflet*, palpitations, nor other morbid phenomena present. In this case it indicated the deposition of tubercles.

with protrusion of the intercostal spaces, more particularly between the tenth and eleventh ribs anteriorly and posteriorly, the integuments of which were œdematous and painful, with an erythematous blush, and conveyed to the touch a sense of fluctuation. Even the patient himself at times experienced the sound of fluctuation in the chest. He was unable to lie on the sound side, his usual position in bed being either on his back or on the diseased side. Respiration was partially audible at the posterior part of the left lung, along the side of the vertebral column. This, however, was rather bronchial respiration than the respiratory murmur, or vesicular respiration. The sound on percussion of the same side was dull or tympanitic, according as the patient assumed the horizontal or erect posture, varying with the situation of the contained fluid. I distinctly recognized *metallic tinkling* on applying the cylinder beneath the clavicle. This, with the sound of fluctuation on succussion, were proofs that air as well as matter were contained within the sac of the pleura; that in fact pleuro-pneumothorax existed." Dr. Croly also found that the heart still occupied the right infra-mammary region; and the left lung sounded well on percussion, and remained free from rale. Such was his condition before his arrival in Dublin.

About the middle of June, 1842, Dr. Graves requested me to visit this gentleman, whose case bore so strong a resemblance to that of Mr. B. just detailed. He was then extremely emaciated and pale, his countenance anxious and haggard, and he was bathed in profuse perspiration. His pulse was 120, small, and weak; his respiration 30, laboured. He was sitting up in bed supported by pillows; any other position was sure to induce intolerable dyspnœa. He complained of the excessive difficulty of breathing, and earnestly intreated that the operation of paracentesis should be performed. On examining the chest *two tumours, each about the size of a hen-egg were observed*, one occupying a situation a few inches below the nipple, the other presented itself between the tenth and eleventh ribs about two inches from the spinal column. *They were rather tender to the touch, a few*

*turgid veins surrounded their bases, the integument covering them was discoloured and reddish, and they both possessed a well marked fluctuation and a distinct, perceptible, and diastolic pulsation.* This latter peculiarity was not only evident to the touch, but quite perceptible to the eye; and as was noted in the two former cases, these tumours were completely devoid of thrill, or *bruit de soufflet*, and the pulsation had all the characters that were observed in the two others. The lower two-thirds of the left side, both before and behind, was completely dull on percussion, the upper-third was quite tympanic. In no part could the respiratory murmur be distinctly heard. When he spoke, or coughed, the metallic phenomena in the upper portion of this side became painfully developed, but I did not hear *metallic tinkling*, and, of course, in his condition, the experiment of succussion was not repeated. The heart, both by percussion and auscultation, was discovered to occupy the right infra-mammary region. The sound on percussion was quite clear all over the right lung, both before and behind, and the murmur was in every part puerile and without rale. As before stated, the operation was urgently demanded by the suffering patient; and though the case was so unfavourable that a successful result was not to be expected, yet it was deemed necessary, as he was almost suffocated, and anxiously looked forward to relief from its performance. An opening was accordingly made into the posterior tumour, and a large quantity of odourless pus was discharged, the entire amount was not, however, drawn off, and the wound was closed with adhesive plaster, and soon united. When next examined, the tumour was found as large as before, and again presented the *pulsation* as well marked as ever. From the operation he experienced great relief for a few days, but again the urgent symptoms obliged Mr. Morrison, his regular attendant, to make a second opening, and as soon as the matter began to flow he got ease from the sense of suffocation. For a little while the patient appeared to improve, but he soon fell a victim to distressing hectic. The body was examined by Drs. Croly and Hanlon; and I shall extract



from the account furnished by the former gentleman all the features of interest which the dissection revealed.

*Post Mortem Examination.*—On raising the sternum, bands of lymph were seen passing backwards to the right side. An immense cavern presented itself in the left side of the chest, so that nothing was to be seen, except about a quart of sanguinolent matter lying at the bottom. The sides of this cavity were lined with a thick coating of lymph, and gave to it the character of the sac of an immense abscess, across which several bands of lymph stretched from one side to the other. At first the left lung could with difficulty be discovered, but it was soon found lying against the bodies of the vertebræ, compressed, shrivelled up, and bound down. It was studded with tubercles throughout every portion of its structure; they had not commenced to soften, and no communication could be traced between any of the bronchial tubes and the cavity before alluded to. The heart lay to the right of the sternum, its apex being opposite to the fifth and sixth ribs. A strong band of lymph of a ligamentous appearance, arising from the anterior mediastinum, attached itself to the right lung; this, with the adhesion of the pericardium to the diaphragm, fettered the heart to its abnormal position. The pericardium was universally adherent to the heart so closely and intimately, that it could not be separated without removing the muscular fibres of that organ, whose structure was pale and flabby; the valves were all healthy. The right lung was found quite healthy, not a tubercle was discovered in any part of it. Dr. Croly accounts for not being able to trace a communication between the bronchial tubes and the cavity of the pleura, by the fact that the lung was so much disorganized as to prevent a careful examination. It is to be regretted that he did not inflate the lung while under water, by means of a bellows connected with the left bronchi.

#### REMARKS.

The three preceding cases are no less interesting than important, and, as far as I have been able to ascertain, are per-

fectly new in the history of empyema, there being no mention made of such cases in any of the recent writings on the disease. It is worthy of notice that in all three, large tumours presented themselves in the situation usually occupied by the heart's apex, and in all, the heart itself was dislocated to the right of the sternum; there cannot then be the least doubt as to the source from which the pulsation was derived, and the manner in which it was communicated to these abscesses. The heart, pushed out of its normal position, pulsated strongly and equally against their walls, and their contents being fluid and of equal density, a uniform and diastolic impulse was communicated to all parts of their surface, more intense, of course, in those situations nearest the source of pulsation. This accounts for what was noticed in the three cases, that the pulsation did not resemble that so often observed in tumours lying over large arteries, in which the motion consists in a mere tilting forward, nor was it like that which is seen in ordinary abscesses lying on an artery in which the pulsation occurs, generally speaking, along the line of the vessel, and is scarcely perceptible in any other part of the tumour; but it was uniform, expanding, and strong. In the two last cases, the tumours behind either derived their pulsation from the heart or from the thoracic aorta, and were from their size, situation, and feeble pulsation, more likely to lead us into error than those in front. What are the affections with which these cases might have been confounded by a person ignorant of the actual state of our knowledge respecting thoracic disease, or who, unacquainted with their history, had only seen them for the first time? Thoracic aneurism, and pulsating cancer of the lungs immediately present themselves to our view, and on examination we shall find that they possess some features in common. When compared with aneurisms we have, in both cases, tumours occurring in patients, who for a length of time complained of pain in the side, difficulty of breathing, cough, inability to lie but on one side; whose constitutions were exhausted by the protracted and distressing nature of their complaints, and in whom the outward progress of the disease was marked by severe pain at a particu-

lar point, in which, after a time, a small tumour, of a soft and yielding nature, is observed, which gradually increases in size, is totally devoid of pain, and presents well marked *diastolic pulsation*. But, on the other hand,\* the history of the last two cases was that of pleurisy with effusion; their duration also (three years) was greater than the average length of time that patients with thoracic aneurisms live,\* and at no period did they experience those dreadful, tearing, and lancinating pains peculiar to the latter disease; and, in addition, many of the usual symptoms of the affection were absent, such as dysphagia, *the peculiar aneurismal cough*, a *bruit de soufflet*† on placing the stethoscope over the tumour, and a thrill sensible to the hand; and as far as I have been able to ascertain, aneurism of the thoracic aorta has never presented itself externally in two situations so *widely separated*. They were also distinguished from aneurism in the following particulars: the greater portion of the affected side was dull, and without respiratory murmur,‡ yet the pulsation was *only* felt in the external tumours, in this respect differing essentially from aneurisms, in which the pulsation, thrill, and *bruit de soufflet* (when present) *are most intense at the point of maximum dulness*; and though by pressure on a bronchial tube, aneurisms may prevent the entrance of air into the part of the

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\* Patients with thoracic aneurisms seldom live beyond two years, and accurate statistics would probably show that they rarely last out so long. I have seen one case in which the disease existed seven years. The patient was under the care of Professor Porter, by whose judicious treatment his life was no doubt prolonged. In this instance, the immediate cause of death was extensive hydrothorax, the effect of pressure on the large venous trunks by the aneurismal tumour, and not from the rupture of the sac.

† I am aware that *bruit de soufflet* is not a constant sign of aneurism; many cases have come under my notice in which it was either absent or intermittent. At present we are ignorant of the peculiar circumstances which determine its presence or absence in aneurisms.

‡ Dr. Greene has given the details of a rare case of aneurism, in which just before death the entire left side of the chest became dull, owing to rupture of the sac and extravasation of its contents.—“*Dublin Journal of Medical Science*,” vol. x. p. 362.



lung to which the tube leads, and thus produce absence of murmur, yet this portion of lung will yield a clear sound on percussion, thus presenting phenomena altogether different from those observed in my cases.

These cases, however, establish the fact, that "empyema of necessity" is liable to be mistaken for aneurism, particularly (as in the first case) when it occurs in the form of *one large pulsating tumour*, and an accurate knowledge of the characteristic features of the two affections is necessary, in order to avoid committing the grievous error of pronouncing an empyema to be an aneurism, or *vice versa*. But we do not anticipate so much difficulty in distinguishing between these two diseases as between such cases as I have detailed, and "cancer of the lung and mediastinum." At the very outset of our investigation a great difficulty presents itself, for we cannot avail ourselves of the aid derived from the history of the disease, for in many of the most accurately recorded instances of cancer of the lung, the patients evidently suffered at the commencement of their illness *from pleurisy excited by ordinary causes, and followed by empyema*, and in other instances where the existence of empyema was not actually discovered, the history of the cases resembled in many particulars that of ordinary pleurisy. But this fact will be more apparent by laying before the reader a brief outline of some of those examples of cancer of the lung, which during life were the most minutely observed, and after death the most carefully examined.

The first on record, which can be of any use in assisting us in laying down rules of diagnosis, is described by Doctor Graves.\* This was followed by some interesting cases from Heyfelder,† and lastly, Dr. Stokes has contributed others of extreme value; and in his paper will be found the actual state of our knowledge, both as to the pathology and diagnosis of this disease. In some of these cases, there are many symptoms which

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\* Graves's *Clinical Medicine*, p. 792.

† *Archives Générales de Médecine*.

are not only common to both affections, but which, before the appearance of these I have now brought forward, were considered as exclusively belonging to encephaloid disease of the lung. In that described by Doctor Graves, the patient at first laboured apparently under pleurisy; and this view of the case seemed confirmed by the following symptoms: "decubitus on the affected side (the right)—fixed condition of that side—stitches on drawing in deep breath. The physical signs were universal dulness, with bronchial respiration all over the right lung; no rale; no resonance of the voice, diminished vocal vibration. At the post mortem examination, the whole right lung was converted into a mass of encephaloid matter; pleura greatly thickened and dense. In Heyfelder's case, the patient was attacked twice with acute pleuritis. When he first saw him he was labouring under acute pain in the left side; stitch on deep inspiration; inability to lie in any position but on the affected side. The left side was fixed, and was likewise *dilated*. The physical signs were *complete dulness all over the left lung, with absence of respiratory murmur*. No ægophony over this side. The *heart was dislocated to the right of sternum*; and in the situation usually occupied by it, *there was a soft, elastic tumour the size of two fists*. The right lung sounded clear on percussion, and in every situation, the respiration was puerile, and without rale. At the post mortem examination, the left lung was found converted into a white lardaceous mass, softened in the centre. The external tumour had sprung from this, and proceeded outwards between the ribs; it was also softened in the centre, and a direct communication existed between these two points of softening. In the remarkable case of Mr. J——, detailed by Dr. Stokes, the symptoms were at first, solely those of pleuritis, attended at the commencement by dulness, occupying only the lower half of the pleural cavity, but which after some time extended all over the right side; and this side, which at first was of equal size with the left, soon became dilated to the extent of two inches. In addition to these symptoms of empyema, he was affected with œdema of the right

side, and the peculiar varicose condition of the veins of the same side, upon which Dr. Stokes lays such stress, became very evident: he lingered on for some time, and died in great pain. At the post mortem examination, a large quantity of pus, amounting to three pints, was found in the pleura. The lung was converted into a "solid, heavy, fibro-cartilaginous mass of a brilliant, white, brain-like colour, interspersed with black spots, of the diameter of a six-pence each, contrasting singularly with the white portion." The liver was "sound, *but somewhat enlarged, and projected about three inches below the cartilages of the ribs*, and at the point of contact with them, presented a very deep sulcus, such as Dr. Stokes has described in his observations on the diagnosis of empyema—a condition of the organ evidently the result of congestive engorgement.

From the short description of these three cases of cancerous degeneration of the lung, we may observe that they all began with symptoms of pleurisy. In all, decubitus could not be borne on any, but the affected side. The physical signs were extremely like those detailed in my cases; and in one (that by Dr. Graves) a soft elastic tumour presented itself behind, very close to where a tumour appeared in two of my cases; and in Heyfelder's, a large soft, elastic, tumour appeared in the inframammary region of the affected side, a position which, in my three cases, was occupied also by soft, elastic tumours. Now, supposing that these encephaloid tumours (for such they were found to be) had possessed the pulsation, which every-day's observation shews, that tumours of the kind are extremely likely to enjoy, how could such a case be distinguished from either of my two last? The grounds of diagnosis could not be derived from the history of the cases,—from the sufferings of the patient,—from the physical signs,—or from the nature of the tumours (presuming the encephaloid masses had pulsation),—or from their position, for an empyema may point, and an encephaloid tumour may form, on any part of the thorax. Nor could the comparison of the physical phenomena of the two sides of the chest afford much assistance; for in two cases of the malignant



disease, and in two of the empyemas, the dulness and loss of respiratory murmur were confined solely to one side. The other lung possessed clearness of sound on percussion, pure respiratory murmur, and freedom from rale. In the third case of malignant disease, and the first case of empyema, the physical signs of bronchitis were evident in the lung of the unaffected side, and *dislocation of the heart* observed in my three cases was also present in the example of encephaloid disease by Heyfelder. But even in these apparently obscure cases, considerable advantage will be derived from an attentive consideration of the points laid down by Dr. Stokes, as diagnostic between encephaloid diseases of the lung, and the ordinary affections of that organ. We have not, for instance, in empyema, the very remarkable varicose and tortuous condition of the venous system, accompanied by œdema of the chest and arm, occurring *only* on the affected side. For though it is mentioned that varicose veins surrounded the bases of the tumours in two of the foregoing cases, yet such a condition of the veins is widely different from that alluded to in Dr. Stokes's paper, and not likely to mislead the observant physician. Nor have we the remarkably persistent bronchitis noticed in the cases by Dr. Graves and Dr. Stokes, and the peculiar expectoration resembling black current jelly, from its admixture with blood. In the case by Dr. Stokes, these symptoms were not noticed at the time the affected side was *dilated*, but appeared after it had returned to its natural dimensions ; and the liver was found protruding beyond the ribs for nearly three inches, *though the sides were symmetrical*—a circumstance not as yet observed in ordinary empyema ; but to this latter phenomenon I shall return in another place.

These two latter circumstances proved an obstruction to the *intra-thoracic* circulation : the return of the dilated side to its natural dimensions shewed a *decrease* in its fluid contents, consequently, the obstruction must have been caused either by a tumour pressing on some of the large vessels, or by an important alteration in the structure of the lung itself.

The next feature from which information, in doubtful cases,

may be obtained, is the appearance of soft, elastic, and painless tumours in different parts of the body. These were observed in three of the cases described by Dr. Stokes, and presented themselves at a period long subsequent to the thoracic affection; and in a beautiful specimen of cancer of the lung, exhibited at a late meeting of the Pathological Society by Dr. Law, a soft and large tumour of an encephaloid nature appeared above the right clavicle, shortly before death. From what has been said, the occurrence of such tumours on the *affected* side, would greatly embarrass the diagnosis; but the situation in which they form appears to be quite accidental. In Bayle's and Dr. Law's cases, they were situated above the clavicle; in Dr. Graves's, one was attached to the ramus of the jaw, one to the epigastrium, and one to the posterior part of the thorax; in Heyfelder's, one appeared at the infra-mammary region, and another under the left clavicle; and a fifth instance of this coincidence of cancer of the lung, with the appearance of soft, elastic tumours on the different parts of the body, will be found in Forbes's "British and Foreign Review"—No. xxxii., p. 384. The case is extracted from Kerst's "Pathology," and is a remarkable instance of the *latency*(?) of thoracic cancer.

"The patient was a soldier, nineteen years old, who said that about three weeks before his admission, as he was walking, he felt a sudden pain in the ham, and on reaching home, felt a swelling there, which, in twenty-four hours, increased to the size which it presented on his arrival at the Infirmary. At this time, the left knee was much enlarged, but the pain had not increased. There was swelling as large as a goose-egg in the ham, partly compact, partly fluctuating, and on a moderate pressure, distinctly pulsating. Under the notion that it was a false aneurism, compression was employed for some time; but as the swelling increased, and the cedema of the leg came on, the femoral artery was tied; after the operation, however, which in itself was successful, the tumour continued to grow as rapidly as before: the patient *began to cough as if from organic disease of the*

*lungs*, and gradually sunk. On examining the body, the internal organs were found healthy, except the right lung, which was *completely converted into a brain-like mass*. The tumour in the ham was fifteen inches long, and twenty-four inches in circumference, and adhered firmly to the periosteum of the femur and tibia. On its surface were five sacculi, holding between five and six ounces of a sero-sanguinolent fluid." Suffice it to say, that the tumour presented a well-marked example of encephaloid disease, and was curious from the fact that the artery ran *over* it, lying imbedded between two of the sacculi.

The presence of cancer in any of the other viscera will, likewise, it is hardly necessary to say, afford most valuable assistance, and the persistence of bronchitic rales, not removable by treatment, and continuing after the affected side has returned to its natural dimensions, constitute a point of dissimilarity of extreme value; for in every case of empyema I have seen, in which bronchitic rales existed, they always disappeared as soon as the effusion began to be absorbed, except in some rare cases, where the deposition of tubercle was rapidly progressing.

#### PURULENT EXPECTORATION IN EMPYEMA.

The case first detailed differs in some points from those which followed, and presents features which demand a separate consideration. The disease ran an unusually rapid course, if compared with those instances, where the matter of an empyema makes its escape outwards, but particularly rapid when compared with the slow progress of the other two cases, which extended over a period of between two and three years each. This circumstance may be accounted for by the difference in the habits and constitutions of the patients. The health of the woman, previous to the attack of pleurisy, was irreparably destroyed by hardship, syphilis and mercury, and in her cachectic and exhausted condition, any acute affection would, no doubt, have exhibited unusual virulence.

Three weeks after her admission into Hospital, she began to



expectorate matter of a decidedly purulent character ; and bronchitic rales were heard throughout the right lung. A few days after, diarrhoea set in, and resisting every kind of treatment, ceased spontaneously on the bronchial flux becoming greatly increased, for we find it noted on the 21st of October, that she had expectorated a pint of greenish pus, and that the bowel complaint had received a notable check. The post mortem examination proved that the bronchial membrane was in a *perfectly healthy condition, and no trace of a communication between the sac of the empyema and a bronchial tube could be discovered.* The tubercles in the left lung were in a crude, unsoftened state, so that the pus expectorated could not have proceeded from them. We are, therefore, compelled to consider this case as one of those in which the mucous membrane of the lungs and (as occurred also in the present instance) that of the intestines take on a vicarious action, by which an evacuation of pus, either by absorption and secretion, or some other process, is effected, which, as it advances, a corresponding diminution in the empyema is noticed to take place. How the process of absorption and removal of the matter of the empyema and its elimination from the mucous membrane of the bronchial tubes, intestines, bladder, or vagina, is performed, remains an undecided question. Certain it is, that from a very early period of medicine, the process has been familiar to physicians, though overlooked by many late writers on the disease in question. I must not, however, omit to mention that my friend Professor Greene has again directed attention to this subject, in his admirable paper on "*Empyema*," in the 17th volume of this Journal. He details the particulars of four cases of the disease, in all of which copious *purulent* expectoration was a prominent symptom ; and in all there were external tumours, which it was deemed prudent to puncture. In these instances, it was observed that as soon as the matter got exit by the external opening, the quantity of *purulent* expectoration diminished, and the same circumstance occurred in the case now mentioned. Dr. Greene adds—" the first explanation I heard offered as to the nature

and cause of this expectoration, was suggested by Dr. Hutton, in a consultation held on one of the cases detailed. He observed, that he had frequently seen the expectoration to subside and lose its character when an opening had been made for the collection, and had consequently come to the conclusion, that in many cases of empyema, the expectoration was the result of an effort of nature to free the system of purulent deposit through an external outlet, which in these instances was effected through the bronchial tubes."

The paper of Dr. Greene must be regarded by every physician as one of the most useful that has appeared for many years. We learn from it that though a patient present all the symptoms of extensive empyema of one side, with bronchitic rales or gurgling in the opposite lung, and copious *purulent* expectoration, the case is not to be despaired of, nor are we justified in giving a positive diagnosis of the existence of pulmonary abscess.

Whilst acting as Clinical Assistant to my friend Dr. Graves, a patient was admitted into the medical wards of the Meath Hospital, with the following symptoms

CASE IV.—*Acute Pleuritis, followed by Empyema, copious purulent Expectoration; Recovery.*

He had been in Stevens' Hospital for an attack of acute pleuritis, was treated in the usual manner, and, after some time, was dismissed cured. He again caught cold, and being unwilling to enter hospital, remained at home without any treatment. After a month or six weeks, he and his friends became alarmed at the quantities of purulent matter he expectorated, and he determined on entering the Meath Hospital. He now presented the usual well marked symptoms of empyema of the right side; his pulse was weak, about 90; his breathing rather difficult; his countenance anxious; he had cough, with *copious purulent expectoration*, but no sweating or other symptom of hectic. The two inferior thirds of right side were completely dull on percussion, with absence of respiration. The intercostal

spaces were dilated, and this side was nearly two inches greater in circumference than the other, in addition to which, he had depression of the liver, and loss of vocal vibration all over the dull portion of the chest. The left side of the chest sounded clear on percussion, and the respiration was free from rale in every situation, except about the situation of the large tubes, where there was occasionally heard a loose bronchitic rale, invariably removed by a paroxysm of coughing, attended with expectoration of the purulent matter.

I was glad to find that on the patient's being examined by Dr. Graves, he immediately declared it, as one of those to which Dr. Greene had drawn the attention of the profession; a conclusion at which I had already arrived, for reasons which shall be mentioned hereafter. It was determined to do no more than assist the efforts of nature by supporting the patient's strength, and as he had been greatly reduced by his previous illness and by the privations he had endured before his admission into the Meath Hospital, a generous diet and small quantities of wine were allowed him. He had not been under this treatment a week before his pulse became full and fell down to the natural standard, he lost the anxious expression of countenance, his breathing became easy, and he began to gain both flesh and strength, and yet he continued to expectorate daily *two large sputa-cups full of thick, yellow, "well concocted" pus*. I do not recollect a case that afforded me greater pleasure in observing, or from which greater information was to be derived. At each morning visit we found our patient perceptibly improved; from being haggard and emaciated he became fat, ruddy, and strong; and at each visit his sputa-cup was found full of pus of the character I have mentioned. The progress of the case was most satisfactory, even more so than in those detailed by Dr. Greene, for in his, paracentesis was resorted to, but in our's the entire of the empyema was removed *by expectoration*. At the end of six weeks the patient was discharged without a symptom of his complaint re-



maining, his right side perfectly clear ; no cough, or difficulty of breathing ; pulse natural ; strength restored.

CASE V.—*Acute Pleuritis, followed by Empyema, copious purulent Expectoration ; Recovery.*

The following case came under my observation within the last four months, and I shall extract briefly the notes of it from my case-book. A woman aged 30, mother of five children, was attacked about two months before she came to me with acute pain in the left side, difficulty of breathing, stitch on drawing in a deep breath, and the other usual symptoms of acute pleuritis. She applied for relief to a medical man in this city, and was bled by him and got some opening medicine. From the loss of blood she experienced some relief, but neglected all medical advice till she came to me, when, in addition to the symptoms already detailed, I found the lower third of the left side completely dull and without respiratory murmur, and all over the middle third behind, a loud and rough friction sound could be heard. The dulness extended round under the axilla to the left infra-mammary region ; the heart was felt and seen pulsating to the right of the sternum, and its sounds were louder and more distinct under the right nipple than in any other situation. They were not accompanied by any abnormal bruit. The left side was equal in dimensions to the right. When the hand was placed over the dull part behind, no vocal vibration could be perceived ; when carried up over the middle third, the friction could be most distinctly felt, and also immediately under the left axilla, but in every other part of the left lung and all over the right, the sound on percussion was clear, and the respiratory murmur was loud, puerile, and without any kind of rale ; yet *she complained of frequent cough attended with considerable purulent expectoration*, which she used to collect in a tea cup for my inspection on every occasion she visited me. This last symptom, together with the state of the pulse, 108, weak and soft, and night sweats, led me to make frequent and most

accurate examinations for phthisis, but I could not discover the least trace of tubercular deposition, nor did the previous history of the patient warrant the supposition, for except the present attack she had always enjoyed good health. There was no enlargement of the liver. I considered the *purulent expectoration* as the result of the peculiar action of the bronchial membrane before alluded to, but the weak and feeble condition of my patient did not warrant me, I conceived, in leaving the evacuation of the effusion to the unassisted efforts of nature; I therefore placed her under a mild mercurial treatment combined with expectorants, blisters to the side, and a generous diet with the cautious use of wine. This was a plan of treatment against which strong arguments, grounded on the presence of purulent expectoration, sweating, and quick pulse, would have been urged some years ago, with all the appearance of experience and sound judgment for their authority; but through its agency, and the efforts of nature, the entire quantity of the effusion was removed, and the patient was restored to health in about a month from the time she first presented herself to me. After the mercury had slightly touched the gums, I placed the patient on the use of infusion of bark, as I did not consider the use of iodine necessary in her case. I have purposely omitted an account of the changes in the physical signs during her recovery, as they differ in no material point from what is ordinarily observed in such cases.

Before the appearance of Dr. Greene's paper, these cases would have been considered as hopeless examples of pulmonary abscesses, or at least of empyemas bursting into a bronchial tube. This leads me to make a few remarks, suggested by the close observation of some cases of empyema, which have terminated by purulent discharges from the bronchial tubes. There are two modes by which this process is effected; in one, the membrane *takes on a vicarious action*, by which large quantities of pus are discharged *without any distinct evidence of inflammation being set up in the membrane, or communication being established between the bronchial tubes and the sac of the abscess.*

In the other form, a *direct* communication exists between the bronchial tube and the sac of the empyema. They are both efforts of nature to get rid of the purulent collection and effect a spontaneous cure, but as the means adopted are so widely different, an equally opposite train of symptoms, may naturally be expected to attend these processes, and such we find to be the case.

In the examples detailed by Dr. Greene, and in those which I have given, the expectoration was thrown up *in small quantities at each paroxysm* of coughing, and though it amounted to a considerable quantity during the twenty-four hours, yet what followed each paroxysm of coughing never occasioned any distress to the patient, or alarm to his attendants, and was excreted gradually and regularly, without producing any violent or distressing symptom to the patient; and the removal of the empyema, as shown by diminution in the extent of the dullness and return of respiratory murmur in the affected side, was equally gradual and progressive. But, in the second class of cases, where a direct communication has been established, we have, in addition to the rapid development of the physical signs denoting the accident (such as the sudden removal of the dullness, with metallic phenomena of the voice and cough, and a tympanitic sound over the portion of the chest previously dull), *a violent and sudden paroxysm of coughing, usually accompanied with expectoration of a large quantity of pus, so great as in almost every instance to produce the most alarming symptoms of suffocation, and not unfrequently even death from this cause.\** This is followed by relief for a time, but a second and third accumulation of the matter takes place, which is again got rid of in the same way; and on each occasion the patient's life is in imminent danger from asphyxia.

I have now seen three instances of empyema terminating in

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\* See Hodgkin's Lectures on the Morbid Anatomy of the Serous and Mucous Membranes.



this manner, and the particulars of a fourth have been communicated to me; and though a pretty frequent, it is by no means a very desirable mode of cure.

In my first case, the expectoration, though copious, purulent and foetid, was never thrown up in the manner indicative of a direct communication with the pleural cavity, nor was any such communication discovered at the *post mortem* examination, neither was there evidence of bronchial inflammation, and, as before stated, the tubercles being hard and crude, could not have supplied the pus so abundantly expectorated; the conviction, therefore, is forced on us, that, in this particular instance, we have a direct confirmation of the doctrines advanced by the ancient physicians, and more recently enforced by Drs. Hutton and Greene; and were evidence wanting, it is supplied by the occurrence of the uncontrollable diarrhoea, which, resisting every kind of treatment, received a decided check on the purulent expectoration being established; and it is also remarkable, that the inspection of the intestines afforded no explanation for the occurrence of this latter formidable symptom. Heretofore, the efforts of nature in this woman were unavailing, and, as an additional one, she endeavoured to procure the evacuation of the fluid by an external opening; but the shattered and broken down constitution of the patient was unable to bear up against processes so slow and wasting, and she fell a victim to the disease in spite of the great exertions made by nature for her recovery. The post mortem examination showed that the layers of lymph, lining the opposed surfaces of the pleura, were exceedingly thin; and this will account for a circumstance in which this case differed from the two which follow it, viz., that after the evacuation of the fluid of the empyema, the sound, from being dull, immediately became *clear*. Many treatises on auscultation assert that after the removal of the effusion, the sound becomes clear. This is not strictly true; for if the layers of lymph be unusually dense, the sound will still remain somewhat dull, and Dr. Stokes has shown that in empyema of long standing, the ribs become hypertro-

phied—thus constituting another cause for dulness. In our case, the clearness of sound was explained by the small quantity of lymph found lining the sac of the abscess.

The mode by which the matter works its way externally has not been sufficiently investigated. In some instances an abscess forms in the integuments, which opens both inwardly into the pleura, and externally through the integuments. But in other cases, there is no such abscess, and the process commences on the inner surface of the costal pleura. Thus Dr. Hodgkin\* thinks, “that in some cases, the process resembles one which more frequently occurs in the peritoneum; viz., that when a considerable quantity of the inorganizable product of inflammation is collected, ulcerative absorption takes place in that part of the serous membrane with which it is in contact, and that, by a communication of the same process, the external opening is effected.” In our case, the lymph was uniformly diffused, and in no part was it collected in any considerable quantity; and, as far as one instance goes, it confirms the observation of Laennec, who considers that it is by means of gangrene and ulceration of the pleura, that the fluid works its way outwards, and that destruction of the periosteum and caries of the ribs, are frequent accompaniments of the lesion.†

#### METHOD OF DIAGNOSIS IN EMPYEMA WITH COPIOUS PURULENT EXPECTORATION.

It may be useful to investigate the grounds of diagnosis in cases like those detailed by Dr. Greene and myself, which presented some of the symptoms of pulmonary abscess and bronchitis; for it is evident, that without clear and distinct views on this subject, no useful conclusion can be arrived at, and our prognosis must be devoid of anything like certainty, or even probability.

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\* Op. cit. vol. i. p. 113.

† See Forbes's Translation of Laennec on Diseases of the Chest, 4th Ed. p. 406.

In the first case detailed by Dr. Greene, except the abundant purulent expectoration, “no sign of pulmonary abscess or fistulous communication with a bronchial tube could be discovered.” In his second, the symptoms likely to lead to an erroneous diagnosis, were the following:—“On applying the stethoscope under the spinous process of the scapula, and towards the root of the lung, a loud gurgling sound was heard; the resonance of the voice, also, was so loud and clear in this situation, as to amount to imperfect pectoriloquy, while percussion yielded a very dull sound. All these phenomena were the more striking, as contrasted with the voice and respiration on the opposite side. These signs, combined with the profuse, purulent expectoration, led me to suspect that the pleuritic effusion might be complicated with some structural disease of the lung—probably with a pneumonic abscess.”\* In his third case, we find no symptoms which could lead us to suppose the existence of a pulmonary abscess, except the *copious purulent expectoration*. The lung of the unaffected side yielded a clear sound in every situation, and the respiratory murmur was in every part puerile, and free from rale.

So that we have now *six* cases of empyema, in all of which copious purulent expectoration formed a prominent symptom; in *four* of them there were *no physical signs whatever* to account for this phenomenon, *not even those of bronchitis*.† In one, we are told, a loud gurgling sound was heard towards the root of the lung; but it is not mentioned whether this sound was persistent, or, if remov-

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\* Dublin Medical Journal, vol. xvii. p. 275.

† I am not ignorant of the fact, that in some rare cases of phthisis, the constitutional symptoms may continue for a long time, before the slightest trace of the physical phenomena of the disease become manifest, owing, most probably, to the morbid processes being confined to the central parts of the lung. I have now seen many such cases, and have observed in some of them a *peculiarly fetid odour from the breath after coughing, and from the expectoration*. The diagnosis in these obscure cases rests upon the want of correspondence between the presence of all the symptoms of phthisis, and the total absence of the physical phenomena. We are not, however, in such cases, left long in doubt, for very soon the lesion becomes discoverable by auscultation and percussion.



able by a paroxysm of coughing; there were also "imperfect pectoriloquy," and "a very dull sound." "Gurgling," "imperfect pectoriloquy," "and a very dull sound," are then the only physical signs likely to mislead the physician; and in the present state of the science, and possessed as we are of the facts disclosed in Dr. Greene's paper, we do not anticipate much difficulty on these points. The gurgling was but a larger degree of the rale noticed in my second case, and would probably have been completely removed, or at least greatly modified, by coughing, followed by expectoration. The presence or absence of the "imperfect pectoriloquy," by itself, must be considered of no value whatever as a sign to be relied on, either for or against the existence of pulmonary abscess in any part of the lung, and, above all other situations, of least value at the root of the organ, for here there is naturally an increased resonance of the voice, which some term bronchophony, and others may, with as much reason, call imperfect pectoriloquy. The dulness of sound was caused either by the deposition of thick layers of lymph, the result of the previous pleuritic inflammation, or by a still existing effusion in the part—a condition by no means irreconcilable with the fact, that gurgling was heard over the seat of this dulness, for Andral distinctly states that an effusion of fluid between the lungs and the ribs does not prevent our hearing sounds generated in the bronchial tubes.\*

The history of this case, the situation (the root of the lung) in which the phenomena occurred, and the paucity and valueless nature of the signs, could hardly mislead any one at the present time, particularly when we bear in mind that pneumonic abscess

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\* "When the bronchi are full of mucus, the interposition of a liquid between the lungs and the ribs does not prevent the different rales from being heard, to which the accumulation of this mucus may give rise. This remark is not devoid of importance, for the existence of these rales may incline one to think, that the lung is in immediate contact with the ribs, and consequently may occasion the disease to be mistaken."—*Clinique Medicale*, by Spillan, p. 603.

is one of the rarest lesions met with in the lungs,\* and almost always occupies the base of the organ, whilst tubercular abscess is situated in the apex. The reason why pneumonic abscess so seldom occurs, has been accurately pointed out by Dr. Stokes;† and a moment's reflection will shew, that it is next to impossible an abscess of this nature could form at the *root* of the lung.

These circumstances, taken in conjunction with the fact, that *true pneumonic abscesses are not accompanied with very copious expectoration; but, on the contrary, are found to contain an exceedingly small quantity of pus‡*, will enable the observer to arrive at a correct diagnosis in a similar instance.

\* “At the period when Laennec published his work on Auscultation, purulent collections were found but *five or six times* in the inflamed lung; they were yet very small. The *largest abscess met could scarcely admit the ends of the three fingers* joined together. As for ourselves, it has not fallen to our lot *more than once to see a real abscess after a pneumonia, at the La Charité.*”—Andral's *Clinique Medicale*, by Spillan, p. 382.

He alludes to another example of abscess of the lung after pneumonia, presented to the Royal Academy of Medicine by M. Honoré. *These two appear to be the only cases Andral has met with.*—Op. cit. p. 382.

† “But it is in the anatomical structure of the lung that we find the true explanation of the point in question. If we compare the viscera, with respect to the liability to form abscess, we find that in those in which the earlier products of the inflammation can be got rid of, there is the least liability to abscess. In the brain, which has no excretory duct, abscess is a common result of inflammation; abscess of the liver is less common than that of the brain, and more so than that of the lung; abscess of the kidney may be placed next in the scale, and that of the lung decidedly the last in the order of frequency. Considering the bronchial tubes as excretory ducts, we must admit, that of all the viscera, the lungs have the most extensive apparatus for excretion, whether we consider it in a vital or mechanical point of view. From the first, the products of irritation are got rid of by expectoration; and even in the suppurative stage, the accumulation of the matter is prevented by the universal permeability of the lung.”—Stokes on *Diseases of the Chest*, p. 313.

‡ “The rare instances, in which what may be regarded as abscess in the lung really takes place, occur when a portion of lung has been consolidated by inflammation, obliterating the air-cells. In such consolidated portions of the lung suppuration may take place, and produce a collection of pus having the character of

In one of the cases I have detailed, the bronchitic rales were diffused all over the sound lung, and yet no trace of inflammation could be detected at the *post mortem* examination; in the other, a few mucous rales were heard occasionally at the root of the lung, which disappeared after each fit of coughing, attended with purulent spitting, and were unaccompanied by any fever or distress of breathing which could legitimately be ascribed to bronchitis.

We are therefore warranted in deducing from the foregoing cases the following rule. *That purulent expectoration in empyema, though attended by quick pulse, sweating, emaciation, and other hectic symptoms, is not indicative of tubercular or pneumonic abscess, unless accompanied by unequivocal physical signs of these lesions; but, on the contrary, it is to be regarded as the consequence of an effort of the constitution to get rid of a large collection of purulent matter, by one of the ordinary emunctories.*

Since the above was written, Dr. Stokes has informed me of the particulars of two cases, in both of which there were extensive empyema of one side, and *copious purulent expectoration*, but without any of the usual signs of abscess or chronic bronchitis. These two cases, from a physician of such accurate observation, strengthen, in an essential degree, the position upon which the diagnosis, above announced, is grounded, and confirm the conclusions to which I have been led.

Andral also details the particulars of a case of empyema, in which, before death, *purulent* expectoration took place, "which seemed to come from a tuberculous mass;" but at the *post mortem* examination no cavity was detected in either lung, some *crude* tubercles were found in the upper portion of the right one. In his remarks on the case, he says, "we shall also

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abscess. The pus so formed is neither *very pure* nor *very copious*. I do not know that I have seen above a drachm collected in such a cavity, and in most of the instances which I can call to mind, there was also present, gangrene of the lung, which had produced some slough or eschar."—Hodgkin's *Lectures on the Morbid Anatomy of the Serous and Mucous Membranes*, vol. ii. p. 5.



direct attention to the nature of the expectoration, similar to that yielded by *large tubercular cavities*, and which was merely the product of the bronchial mucous membrane." The mucous membrane presented *no trace of disease*.\*

CONDITION OF THE SOUND LUNG IN EMPYEMA.

There is, however, a *true* bronchitis of the sound lung which occurs in empyema, where the lung of the affected side is so compressed and bound down by adhesions as to be unable to take any part in the respiratory process. In four cases which I have witnessed, the disease was ushered in by accession of fever and increased difficulty of breathing, and no satisfactory cause could be assigned, save *the additional duty imposed on one lung by the useless state of the other*. In these instances the expectoration was not purulent, nor did it differ in any respect from what usually attends acute bronchitis, and in all, the affection disappeared on an amendment taking place in the opposite side of the chest.

Such cases are not likely to be confounded with those in which the mucous and gurgling rales are produced by the quantities of pus in the tubes, the result of vicarious secretion. But there is also another condition of the sound lung in empyema, which, though it has escaped the notice of writers, it is necessary we should be familiar with, inasmuch as our overlooking it, or, on the other hand, attaching too much importance to it, will lead us into error, namely, *congestion* of the mucous membrane, *producing physical signs of bronchitis*, or some of the stethoscopic signs of pneumonia. This is by no means an unusual complication of empyema. I have observed it now in several instances, and have no doubt that many cases, presenting the physical signs denoting these conditions of the sound lung, have been recorded as examples of empyema of one side, with bronchitis or pneumonia of the opposite. A little attention will enable us to distinguish this state very readily from an

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\* Vide *Clinique Medicale*, by Spillan, p. 566.

*acute bronchitis*, or a pneumonia, supervening in the sound lung during the progress of the empyema, for though we may discover bronchitic rales all over the back part of the sound lung, in which the respiratory murmur had previously been puerile and free from rale ; or we may often hear a loud, large, and loose crepitus (such as is commonly heard in *typhoid* pneumonia) yet we do not find the *dulness* on percussion, and characteristic sputa of pneumonia on the one hand, nor, on the other, the increase of fever, exacerbation of cough, or great difficulty of breathing which almost invariably accompany an accession of bronchial inflammation. On the contrary, neither the general symptoms, nor the feelings, nor the appearance of the patient indicate the supervention of a new disease. I am disposed, therefore, to attach very great importance to the absence of these latter symptoms as diagnostic signs between this affection of the lung and true bronchitis, for considerable experience and close observation of thoracic disease have convinced me of the truth of the doctrine long since advanced by my friend and respected preceptor, Dr. Stokes, that *these symptoms are a measure of the irritation, rather than of the obstruction in the lung.*

It is unnecessary to point out the errors in treatment and prognosis, into which a neglect of the means of distinguishing between these complications of empyema, will lead the practitioner ; the patient will be harassed by cupping, blistering, and other local applications, and his apprehensions awakened, and the alarm of his friends excited, by the intelligence that his sound lung has become engaged, for we all know how fondly both patients and their friends look forward to a recovery so long as only one lung is diseased, and the error is not confined merely to those imperfectly acquainted with auscultation, it is daily committed by many, otherwise very familiar with the science.

There is no difficulty in accounting for congestion of the sound lung in empyema, if we reflect for a moment on the following circumstances, which I have long considered as quite

explanatory of the phenomenon. First. It occurs for the most part in those cases, where, from some unusual cause, the patient cannot lie on the affected side, but prefers reposing either on the sound side, on the back, or assumes the position termed by Andral *diagonal decubitus*, or, as more frequently happens, he lies altogether on the diseased side. In any of these situations, it is evident that congestion in particular parts of the lung is favoured by the position of the patient. Secondly. A still more important and efficient cause is owing to the circumstance *that in consequence of the compressed, collapsed, and impermeable condition of one lung, the whole quantity of the blood circulating through the body, is driven into the sound lung for aeration and oxygenation, and its sojourn in that lung is prolonged beyond the period which in health is necessary for the purification of only half the quantity; and, as a natural consequence, congestion from this cause depends on the greater or less degree of permeability enjoyed by the lung of the affected side.* The disappearance of this condition of the lung is one of the first symptoms which indicate the absorption of the pleuritic effusion, and proceeds in direct ratio with the gradually increasing expansibility of the compressed lung.

#### CONDITION OF THE LIVER IN EMPYEMA.

In connexion with this subject I may be permitted to allude to the condition of the liver in empyema. For the most ample and accurate observations we possess respecting that organ in the affection under consideration we are indebted to the researches of Dr. Stokes; but, besides the observations detailed in his celebrated work, there are many points worthy of attention, which have hitherto been left uninvestigated.

It is generally supposed that the only way in which the liver is engaged in this disease, occurs when an extensive empyema of the *right* side depresses it *mechanically*; its condition in empyema of the left side has been altogether overlooked. Some time ago I met with a case in which an effusion into the left



pleura, producing dislocation of the heart, was also attended with a perceptible tumour in the right hypochondriac and epigastric regions, which I concluded was an ordinary enlargement of the liver, and I was confirmed in this opinion when the tumour diminished under the use of mercury given for the pleurisy. I have since seen the same phenomenon in cases of empyema of the left side, in which no symptoms of derangement of the liver preceded the pleuritic attack, and in which the disappearance of the hepatic enlargement was *too sudden* and *too complete* to be confounded with the ordinary enlargement of the organ from chronic hepatitis. In some instances this enlargement is attended with pain on pressure; and this symptom has often led to the affection being considered as hepatitis. Now I have no doubt that besides mere *mechanical* depression of the liver, there is another agent of a vital nature, still more efficient in the production of the hepatic tumour, for were we to rest satisfied with the usual explanation, we should expect that the appearance of the hepatic tumour, only occurred in empyema of the right side, so extensive, as to produce not only depression of the liver, but likewise protrusion of the intercostal spaces of that side. But the fact is not so, it is not confined to effusions into the right pleura, but occurs likewise in cases where the left cavity is the seat of the disease, and many of those examples of empyema of the left side, in which tumours in the epigastrium and towards the umbilicus were noticed, and which were considered as depression and displacement of the spleen, were in all probability examples of this enlargement of the liver.\* And on the other hand an hepatic tumour is frequently observed in cases where there is no protrusion of the intercostal spaces, although there exists considerable impediment to the respiration. Let us inquire into the nature of this *enlargement* of the organ, for such I have no doubt will be found to be the true nature of the alteration in

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\* See the works of Piorry and Raciborski. We need not be surprised at this, for I have often seen an enlarged left lobe of the liver mistaken for enlarged spleen, and *vice versa*.

many cases, though I am far from denying that in empyema of the right side, the viscus is also depressed mechanically by the fluid within the thorax. This increase in size, then, seems due to *a congestion or engorgement of the liver analogous to what takes place in cases of morbus cordis and diseases of the lungs, attended with imperfect aeration of the blood.* In these diseases it has long been known, that the liver takes on a supplementary action, by which a quantity of carbon is eliminated from the blood, which the impeded state of the circulation through the heart and lungs renders them unable to accomplish.\* These enlargements are of very frequent occurrence in the class of cases I have mentioned, and every one must have been at times surprised, by their rapid disappearance as soon as the respiration was relieved, and the circulation through the heart and lungs became less obstructed. Morbid anatomy shows us that no material change in the structure of the organ takes place; it is found considerably enlarged, and always gorged with blood, which flows out in great profusion, on an incision being made into its substance, whose consistence is somewhat softer than natural, and darker in colour. But as this peculiar state of the liver does not invariably attend obstruction of the circulation, from morbus cordis or disease of the lungs, even when considerable; so likewise, it is not an invariable attendant on effusions into the pleura, but when the hepatic tumour is perceived, we must, I think, admit of the explanation now offered (in conjunction with mechanical depression, when the effusion occurs on the right side)—a view of the subject, not based on theory, but *grounded on the well-known physiological laws which regulate the combined functions of the heart, lungs, and liver.*†

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\* The researches of Tiedeman and Gmelin, as well as those of Elliotson and Liebig, have now clearly established the truth of the above doctrine.

† In the case of a gentleman, whom I attended along with my friend Mr. Newland, for morbus cordis and incipient phthisis, and who had been for many years affected with asthma; every paroxysm of the latter disease was attended with a remarkable enlargement of the liver, which used to protrude to midway between

Though this peculiar condition of the liver, and the view I take of the hepatic tumours occurring in empyema, have not been noticed by writers on diseases of the chest, yet, in their accounts of post mortem appearances, this state of the liver is frequently mentioned incidentally. Thus, in a paper published by Dr. Stokes many years ago, upon the diagnosis of empyema, he gives the case of a patient, in whom, besides the appearances of empyema of the right side, the liver was found “*nearly three times its natural size.*” As no other alteration is mentioned, we cannot suppose that any was observed, otherwise it would not have been omitted by a writer of such acknowledged accuracy.\* And again, in his work on the Chest, we find him alluding to a case of empyema of the right side, in which the liver was *softened and engorged*.† Andral also remarks, in a casual manner, in his description of one of his fatal cases of empyema of the right side, that *the liver was found enlarged and gorged with blood* ;‡ and at the post mortem of my first case, “*the liver was enlarged to nearly half its normal size, engorged, and full of blood,*” though the empyema was on the left side; and had my attention at that time been directed to this subject, there can be no doubt that such an extensive enlargement would have been readily detected, and we should have had then, what I have since frequently seen, effusion into the left side of the chest, with the occurrence of a large hepatic tumour.

I could quote several other cases mentioned in different pe-

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the ribs and umbilicus, and into the epigastric region. This enlargement generally subsided under leeching of the anus, and its disappearance was almost always attended with relief to the pectoral symptoms. I have observed the same thing to occur in many other cases, where the liver has become suddenly enlarged in morbus cordis. During the illness of the late Mr. Colles, the liver used to increase to nearly twice its natural size in twenty-four hours, during his paroxysms of dyspnœa, and used to disappear with equal rapidity, as soon as he obtained relief in his breathing.

\* Op. cit. p. 503.

† Vide Dublin Medical Journal, vol. iii. p. 57.

‡ Vide Andral's Clinique Médicale, by Spillan, p. 515.



riodicals, where this enlargement of the liver from engorgement was found, at the examination of fatal cases of empyema. I am, therefore, confident that we are not justified in considering the hepatic tumour in these cases, as produced by a mechanical depression alone, for, according to the best observers, this depression is always either preceded or accompanied by a protrusion of the intercostal spaces, and the same explanation has been offered for the occurrence of the two symptoms. But in the case of cancer of the lung and empyema, published by Dr. Stokes, the liver was found much enlarged and engorged with blood, though for a long time previous to death, the right side had returned to its usual size, and all appearance of intercostal protrusion had long before disappeared. The enlargement, therefore, was the result of the same cause which produced the varicose condition of the veins, namely, the impediment to the free circulation through the lungs, whereby a supplementary duty was imposed upon the liver, and, as always occurs in such cases, the organ was found not only enlarged but engorged, and its texture much darker than natural, from its containing a larger quantity of blood.\* It is, therefore, natural to expect that, as in chronic bronchitis, emphysema and phthisis, morbus cordis and cancer of the lungs the liver supplies the place of the inefficiency of the lungs in purifying the blood, that it will act in a similar manner when one of these organs is compressed and rendered useless, by an extensive pleuritic effusion into either side of the chest, and this is proved, not only by my observations in cases that have recovered, but also by the appearances revealed at necroscopic examinations of empyema, recorded by writers who had neither a theory to support, nor a series of observations requiring confirmation, and whose testimony is, therefore, entitled to the

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\* As in the account of the autopsy furnished to Dr. Stokes by Dr. Carroll of Waterford, it is merely stated that the liver was enlarged, I took the liberty of writing to that gentleman, to ascertain more accurately its precise condition, and the above account is extracted from the answer which he very kindly forwarded to me.

highest consideration. I shall now throw into the form of propositions, the points discussed in this paper.

1. That in Cases I., II. and III., we are presented with a new form of Empyema, which may be termed "Pulsating Empyema of Necessity," exhibiting some features common to that form of empyema and to thoracic aneurism, and encephaloid disease of the lung.

2. That it may be diagnosed from thoracic aneurism, by

a. The history of the case.

b. The dulness extending over the whole side, the pulsation being only felt in the external tumour.

c. The absence of thrill.

d. The absence of bruit de soufflet.

e. The extent and nature of the fluctuation.

3. That it may be distinguished from encephaloid disease of the lung and mediastinum, by

a. The absence of the expectoration resembling *black currant jelly*.

b. The absence of a persistent bronchitis.

c. The absence of a varicose condition of the veins and œdema of the side affected.

d. In cancer of the lung the situation in which the external tumours form, is not invariably confined to the thorax.

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4. That copious purulent expectoration in empyema is not always indicative of cavities in the lung; but, on the contrary, is of frequent occurrence in this disease, and seems to be the result of an effort of nature to get rid of the purulent collection by the nearest and readiest outlet.

5. That this symptom, when it results from the above cause, is not attended with the usual symptoms either of abscess of the lungs, or inflammation of the bronchial mucous membrane.

6. That a *true* bronchitis of the sound lung frequently complicates empyema.

7. That still more frequently the sound lung becomes congested, and presents some of the ordinary signs of bronchitis and pneumonia, from both of which it may be distinguished by attention to the rules laid down in the previous part of this communication.

8. That in addition to *depression* of the liver, from mechanical causes, that organ is likewise *enlarged from engorgement with blood* in empyema.

9. This enlargement is not confined to empyema of the right side, but occurs also when the disease is seated in the left cavity of the chest.

10. That this enlargement is identical with that which takes place in other affections of the lungs and heart, where, in consequence of their functions being impaired, an additional duty is imposed on the liver, viz., *that of eliminating carbon from the blood*, as proved by the researches of Tiedeman and Gmelin, Elliotson and Liebig; and as occurs in the former cases, so likewise we observe in this, that the increased size of the organ is due to an additional afflux of blood, whereby its structure becomes engorged, softer in consistence, and darker in colour.

11. This condition of the liver has been observed by myself as proved by dissection (see Case I.), and its presence detected in other cases that have recovered. It has also been mentioned by many writers in their accounts of the appearances noticed at the autopsies of cases of empyema, who have recorded the fact, though unaware of its connexion with the subject under discussion, and it must now be considered as constituting an additional feature in the diagnosis and pathology of empyema.

12. This condition of the liver, when it occurs in the ordinary diseases of the heart and lungs, has been observed to disappear as soon as the obstruction to the circulation of the blood and want of proper aeration, which gave rise to it, had ceased. So likewise in empyema, its disappearance is one of the first signs which indicate the removal of the effusion, and the return of the compressed lung to the performance of its functions.



I cannot conclude without availing myself of this opportunity of returning my thanks to Dr. Graves for his extreme kindness and liberality in permitting me to make use of the cases upon which the foregoing observations are founded.

10, *Lower Fitzwilliam Street.*

ART. II.—*On impending Dissolution and Nervous Affections in young Infants.* By RICHARD DOHERTY, M. D., Honorary Member and Secretary of the Dublin Obstetrical Society.

[Read before that Society, Dec. 4, 1843.]

THE risks to which children are exposed at birth admirably exemplify the three modes whereby, according to Professor Alison's able analyzation of the causes of sudden death, a period may be put to existence in after-life; namely, by Death commencing at the Brain, Death commencing at the Lungs, and Death commencing at the Heart.\* And as, whilst each of these catastrophies is impending, a train of convulsive actions may be established in the adult, so in the child just born, these conditions may exist contemporaneously.

Death, commencing at the brain, may be induced in two ways; firstly, as in compression, when the respiratory function is the first to suffer; and secondly, as in concussion, when the heart's action is directly arrested. The first mode, or that by coma, is frequently a cause of children being still-born; and, as in individuals of a more advanced age labouring under apoplexy, there is venous turgescence, bloated features, slow and impeded respiration, so in the infant, which has so suffered, those peculiarities are observable. It is quite a common circumstance, for the face, when expelled, to assume a purple hue; which colour, if the labour be quickly finished, soon disappears: but if from delay or any other cause the return of the blood from the

\* Outlines of Physiology and Pathology, by Wm. P. Alison, M. D. London, 1833. Page 326.

head be prevented, the external engorgement continues to indicate a similar condition within the cranium, and, although when delivery is completed the heart continues to beat for some time, respiration is with difficulty, or not at all established. The same consequences may be induced if the head be subjected to long-continued pressure from the action of the uterus, or squeezed through the outlet of a narrow pelvis; and they not uncommonly result from the compression produced by the forceps. After recovery from the immediate effects of this condition, a congestion of a minor degree may persist, giving rise to convulsions, or paralysis, if the proper remedies for its removal be not adopted. I shall give examples of the different degrees of this affection. Thus the first is a case of simple congestion; the second, congestion with convulsions easily removed, and so on.\*

CASE I.—M'Bride's child, her first, born Sept. 2, 1839, after an eight hours' labour, lay at evening visit dark-coloured, moaning, and with imperfect and gradually diminishing respiration. Two leeches were applied over the anterior fontanelle, and a warm bath given, after which the child breathed more freely, and was next morning quite well.

CASE II.—The child of Farrell, a woman who was received on the 7th Sept. 1839, in the last stage of phthisis, was at birth, which took place an hour after admission, of a purple colour throughout, and immediately fell into a convulsive fit. Some blood was allowed to flow from the cord, and it quickly recovered.

CASE III.—Higgins was delivered on the 26th June, 1839,

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\* I would premise, that all the cases I am about to relate were noted by me during my connexion with the Dublin Lying-in Hospital, in which magnificent Institution they occurred; and I owe the permission to make use of them to the kindness and liberality of Dr. Evory Kennedy, the then Master, who indeed has shown himself, in his "Essay on Cerebro-spinal Apoplexy and Paralysis in Infants," a successful cultivator of this very field.—*Dublin Journal of Medical Science*, vol. x. page 419.

after a lapse of eight hours. The head was allowed by the attending pupil to remain expelled for above five minutes before the further progress of the child was aided. Its face was then purple, and great difficulty was experienced in resuscitating it. In a few hours it became affected with spasmodic twitchings. A leech was immediately applied to the fontanelle, and a bath given. Next morning the child appeared improved, but there was still some clonic motion of the muscles of the face. A leech was applied to the occiput, and blue pill given, followed by castor oil and turpentine. On the subsequent day it sucked freely, and ultimately recovered.

CASE IV.—Lawlor, being three hours in labour on the 21st August, 1838, the funis came suddenly down before the head, which had at that time almost arrived at the perineum. Efforts to return the cord being unavailing, and its pulsations gradually ceasing, Dr. Kennedy sent for the forceps, but before it arrived, managed to extract the head by introducing the fingers of one hand behind the pubis, and those of the other at the sacrum. The child was with difficulty brought round by means of the warm bath, bleeding from the cord, and an injection. When visited in a few hours it was reported by the nurse to have been very restless since birth; its thumbs were then closely approximated to the palms of its hands, and it showed a general tendency to spasm. Some hydrargyrum cum cretâ was given after the usual purgatives, and it gradually recovered.

CASE V.—Gaffney's labour had, on the 4th August, 1838, continued for four hours, when the membranes ruptured; the funis then descended, followed rapidly by the head. The pulsations of the cord ceased during the uterine action, and returned in the intervals. At length they failed altogether, but as the head was on the perineum, and the pains were strong, the birth was permitted to be effected without assistance. On the expulsion of the child some blood was drawn from the funis, and by the usual means continued for an hour animation was re-



stored. Three days after this child was attacked with spasmodic contraction of the muscles of the jaw and of the extremities, with clenched hands, passing off in tremulous motions. Occasional aperients were alone made use of, and it recovered.

CASE VI.—Bardon was admitted at 11 o'clock on the night of July 14, 1839, in labour of her first child. At 10 A. M. on the next day the os uteri had completely disappeared, and the head entered the pelvis in the third position. At noon it began to change into the second, and at 8 P. M. it had perfected its semi-rotation. From that period it continued to descend, but it was not till 7 o'clock next morning she was delivered, labour having lasted thirty hours. The child was permitted to remain for a few moments longer than was judicious half expelled, and the cord, which was tightly coiled round the neck, ceased to beat before efficient assistance arrived. Resuscitation was accomplished by the usual means. Next morning, July 17, it was reported to have been moaning throughout the night; it was easier then, and swallowed freely; its bowels had been moved by calomel, followed by oil. On the morning of the 18th it had frequent convulsions, and the fingers were strongly clenched, evacuations green. A leech was applied to the back of the neck, and a grain of blue pill given, followed by oil; the bath and counter-irritation were also employed. Throughout the day, however, the convulsions grew more frequent, and during them its features assumed a livid hue, and its fingers were spasmodically turned into the palms of the hands. At 4 o'clock it seemed much exhausted, and died at 10 that night. On post mortem examination the vessels on the surface of the brain were distended with blood; there was subarachnoid effusion, and the brain itself was unusually vascular.

CASE VII.—After a labour rendered tedious by an undilating condition of the anterior lip of the os uteri, and a disproportion between the sizes of the pelvis and the foetus, which descended throughout in the third position, Skinner was delivered on the 9th July, 1839, of her second child. When the

head was expelled a very large tumour was found over the superior angle of the *anterior* part of the parietal and frontal bones of the *left* side; thus marking the unusual position in which the child had passed through the pelvis.\* The forehead having remained as at the commencement of labour turned towards the pubis, was much compressed, and a broad red mark extended around it, having its convexity towards the nose. After the upper part of the child had escaped, the cord having suddenly ceased to pulsate, the expulsion of the remainder was quickened, and as no attempt at respiration ensued, and the heart's action could not be detected, the cord was cut, and the body immersed in a warm bath. The heart soon began to beat slowly and unequally; an ounce of blood was allowed to flow from the funis, and friction with hartshorn sedulously maintained over the chest and spine. In about a quarter of an hour the child began to gasp. A large quantity of tenacious mucus was removed from the nares and throat, and half an hour elapsed before breathing could be satisfactorily established. Even then it could not be made to cry loudly, and it still presented as at birth, contraction of the muscles of the lower lip, ptosis of the right eyelid, and a permanently open state of the left, the pupils being unaffected. A leech was applied to the anterior fontanelle, and failing to draw a sufficient quantity of blood, a second was put on, and the bowels were rapidly freed; after which it fell into a calm sleep, and awoke in three hours, free from all nervous symptoms, and capable of sucking. The child weighed, with its clothes on, nine pounds and a half.

It remained well for ten days, when it was reported to be unable to suck. It could open its mouth freely, but when the nipple or the finger was introduced, closed it convulsively. It clenched its fingers now and then, but had no other spasm.

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\* Out of 1210 deliveries, Naegelé met 359 in which the head presented in the third position, and in ninety-six of these he observed the head to come through the external passage with the face upwards and forwards but three times.—*Essay on the Mechanism of Parturition*, translated by Rigby.

The discharges from the bowels were very foul and green. A grain of blue pill, two grains of chalk, and one of compound powder of ipecacuanha, were divided into two parts, one of which was given immediately, and the other in three hours, followed in four hours by an oil draught. The child was also immersed in a bath. That evening the oil was repeated, with twenty drops of turpentine, and three hours afterwards a turpentine and assa-foetida enema was thrown up. This treatment proved of great service. The remainder consisted of calomel alternated with oil occasionally, and the child recovered.

This case appears to me to illustrate, firstly, a primary apoplectic attack, resulting from pressure on the brain and funis; and secondly, what I shall afterwards have occasion to speak of, a congestion of the nervous centre, sympathetic of irritation on the intestinal mucous membrane.

With respect to the other species of death commencing at the brain, Chossat's experiments have shown, that in injuries to that organ, sufficient to produce concussion, and particularly when the spinal cord has been severely injured below the neck, the circulation in the capillaries has appeared for some time even more affected than the heart's action, although it is by the gradual failure of the circulation that such cases prove ultimately fatal.\* This, then, seems the mode of death when the foetus, having been exposed to strong uterine action, or its head driven with shocks against resisting points, such as incurvated spines of the ischia, is at length expelled, of a pallid hue, with relaxed limbs, and the cord pulseless, or beating feebly; and also in cases of breech-presentation, when in consequence of powerful efforts to withdraw the head, injury is inflicted on the spinal marrow. It will be perceived I do not now allude to cases, in which the child is born delicate in its nature, but I refer to those, by no means rare, wherein, although,

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\* Influence du Systeme Nerveux sur la chaleur Animale. Dissert. Inaug. Paris, 1820.



in consequence of the mother's account of the strong motions she has felt in her child, and the loudness of the foetal pulsations, before the commencement of parturition, we had every reason to expect the birth of a vigorous infant,—yet owing to a tedious or a violent labour it comes forth, pale in colour, of a low temperature, and if not quite dead, makes but puny efforts at respiration. Such cases, I think, illustrate this consequence of injury to the nervous centres; and if the proper mode of assistance be not rendered, they quickly prove fatal from exhaustion, or become the subjects in a short time of spasmodic action. For example:

CASE VIII.—The child of Abby Kelly, borne on the 18th of October, 1838, after a labour of twelve hours, appeared pale and cold, and feeble at birth, so that respiration was with difficulty established. Shortly afterwards it commenced screaming in a low, whining tone, and was attacked with convulsive movements of the face and extremities. It was immediately placed in a warm bath, wine whey given it, and when reaction set in a leech was applied to the nape of the neck. Next day it was much better, having only slight spasmodic movements of the limbs. On the 20th some calomel was given, followed by magnesia mixture. On the 21st the discharges from the bowels had become yellow, and on the 22nd it was pronounced convalescent.

CASE IX.—So in the case of Keegan, delivered for the first time on the 17th of August, 1839, after a labour of twenty-four hours, by the fingers employed as a forceps, in consequence of the head having remained for six hours descending so as to distend the perineum during the pains, and receding on their departure, owing to its progress being opposed by the ischiatic spines, it was necessary, on account of the child's debility, to employ the warm bath and artificial respiration to revive it. The usual dose of calomel and castor oil was given, but next morning it was seized with general convulsions. A leech was applied to the head, and the warm bath again re-

sorted to. Half a grain blue pill, mixed with aromatic water, was followed up in three hours by a draught of turpentine and oil, and small doses of blue pill and Dover's powder given every third hour. The following day spasmodic twitchings and screaming existed; there was considerable strabismus, and sawing of the right hand and arm. The child died convulsed during the night.

CASE X.—In the case of Banks, delivered at 5 o'clock on the morning of the 16th June, 1839, the child presented with the foot, and considerable difficulty was experienced in bringing away the head. It was pulseless at birth, and its life was with difficulty saved. At the usual visit at 10 o'clock on that morning the hands were clenched, the thumbs being grasped by the fingers; there was a tremulous state of the lower jaw, which, though moveable, was drawn somewhat downwards. The mouth was turned to the left side, and deglutition was difficult. A leech was applied to the back of the neck, wine whey given at intervals, and the usual purgatives administered. On the 17th the child had passed a very restless night; the mouth presented a natural appearance, but there was strabismus, and now and then spasmodic twitchings of its arms and legs. A leech was applied to the spine, followed by a stimulating liniment. Three grains of calomel, two drops of laudanum, and five grains of sugar, were divided into six powders, of which one was given every third hour, and the wine whey was persevered in. These remedies were successful, and next day the child was well.

In the two species of impending death depicted in the foregoing instances, it is obvious the treatment will require to be in some degree different. In the former, or apoplectic form, the remedy which should be first resorted to, is evidently the abstraction of blood from the cord, to relieve the turgescient vessels, with the warm bath and friction, to quicken the circulation in the extremities, and cold applied to the head to relieve the

determination there. If after those means have been successful in maintaining the vital principle, a congested appearance should still remain, or respiration be feeble, benefit will result from the application of one or more leeches to the fontanelle, and active purgatives, alternated, if necessary, with wine whey or other stimulants, until the balance of the circulation is established. If convulsions set in, as they indicate a state closely allied to, if not altogether one of meningitis, and at all events liable to become so, the same remedies must be pushed still further, and aided by calomel, counter-irritation to the neck, and cataplasms to the feet. In this particular form, although medicines which rapidly free the bowels are of great service, my own impression is, that injections with turpentine, so indiscriminately resorted to in all spasmodic affections in children, are not judicious. They appear to me to react injuriously on the head, and therefore their use ought, in my mind, to be restricted to other forms of the disease. In cases such as I now speak of, Billiard has pointed out, that besides the congestion of other organs, there is also a congestion of the intestinal mucous membrane, which may give rise to bleeding from the bowels and other bad consequences.\* For its removal it may be necessary to apply a leech to the epigastrium, or anus also, and adopt other measures, peculiarly suited to this complication. It is well to refrain from putting such children to the breast for some hours longer than usual; meanwhile a little milk and water sweetened will be sufficient.

When, on the other hand, the child comes into the world pale and feeble, with symptoms resembling those arising from concussion, blood-letting must not be resorted to in the first instance. The warm bath, at a high temperature, not continued, however, too long, as it would then tend rather to depress the powers of life, frictions to the surface, ammonia applied to the nostrils, mustard to the feet, and the injection into the stomach of a little wine whey, to which a few drops of

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\* Billiard on the Diseases of Infants; translated by James Stewart, M. D., London, 1839; page 285.



ether have been added, must constitute our immediate resources. In throwing into the abdomen a stimulating fluid, there is one point we should recollect, that too large a quantity may act injuriously, by preventing the descent of the diaphragm. A want of unanimity exists amongst authors as to the best mode of employing water for the resuscitation of still-born children. My own opinions I cannot better express than by quoting the following passage from M. Hall's last work. "The most important of all our remedies in congenital asphyxia is the sudden and forcible impression of cold water on the face and general surface. The quantity of the water should not be great, but it should be applied suddenly and with force. The temperature should not be lowered ; on the contrary, the dashing of the cold water should be alternated with a warm bath, succeeded by warm flannels. These too may be applied briskly and suddenly. The efficacy of the remedy is in proportion to the suddenness and the energy of the alternation.—The infant may be placed in a warm bath, and be afterwards rubbed with warm flannels. The sudden dashing of cold water will then especially be doubly efficacious."\* In these directions, which have my fullest accordance, Hall differs from Edwards of Paris, and Schöller of Berlin.† But independent of having witnessed the best effects from this mode of treatment, I consider I am justified, even in a theoretic point of view, in rejecting as inapplicable to the present subject, Edwards' excellent experiments, whereby he demonstrated, that an animal in a state of asphyxy will die much more readily, if immersed in hot, than in cold water ;‡ because, as I shall just now show, the still-born condition is markedly dissimilar from that of asphyxia, though nomi-

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\* New Memoir of the Nervous System, by Marshall Hall, M. D., page 64, London, 1843.

† Schöller recommends the infant to be placed in a bath of cold water, and gives cases in which it proved efficacious.—*Medicinische Zeitung*, 28th April, 1841.

‡ De l'Influence des Agens physiques sur la vie. Par W. F. Edwards, D. M. Paris, 1824. Page 175.

nally called so. The propriety of cutting the cord under such circumstances constitutes another point, upon which there is a discrepancy amongst writers. Observation leads me to side with those, who think, that once the funic pulsations have ceased, the cord can be no longer of service, but will only inconvenience us in employing the bath, and other appropriate remedies. I place no reliance on the possibility of the circulation recommencing at the placenta, for which Chaussier contends; nor can I agree with Baudelocque that the blood still flows through the vein, although the arteries may have ceased to beat. In both classes of cases, and particularly in the latter, wherein the heart's action directly fails, it may be necessary, from the delay in the establishment of natural breathing (which we know is an agent in effecting a circulation of the blood), to resort to artificial respiration, but it is a measure, which should be reserved for a last resource, and never adopted until other means are evidently inadequate.\* I have seen in such instances, benefit result from passing shocks of galvanism through the cardiac region; however, it is very seldom that remedy can be made available, as the apparatus will rarely be at hand at the moment. It often becomes necessary even in these latter cases, for instance, where a tendency to convulsions is manifested, to apply a leech to the head, before the circulation will become adjusted; but it should be at a comparatively later period, and accompanied by the use of stimulants to support the vital powers.

The term *Asphyxia*, as applied to impending death in newborn infants, has been very generally misused. We constantly hear of children coming into the world in a state which is so designated; but this is manifestly incorrect. The word, in its proper pathological signification, only implies a condition, the conse-

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\* It is curious how long insufflation will maintain the heart in action, even in cases in which the nervous system never recovers the injury it has received, in accordance with Sir B. Brodie's well-known experiments, wherein he was able by that means to sustain the circulation after the head had been cut off.

quence of a cause, which directly arrests the supply of pure air that should enter the chest. Now, in the foetus at birth, no such cause exists under ordinary circumstances. The child is then surrounded by an atmosphere of healthful quality, whose ingress is prevented by no mechanical impediment ; and breathing, if it remain unaccomplished, is so, not from any fault in the lungs and its appendages, but from a defect in the stimulus of nervous influence, upon which the muscular actions constituting respiration depend ; and for this reason we should, as I have observed, resort to other measures, rather than artificial inflation, in the first instance.\* There is this difference too, which has not been alluded to by writers on this subject, to be observed between a child still-born, and a person of more advanced age, who has fallen into asphyxia, namely, that the latter has been accustomed to the circulation of arterialized blood, while in the former, that fluid has never, as yet, been perfectly decarbonized. In the adult, the chain of events by which death is induced, when it commences at the lungs, may be stated to be : firstly, a suspension of the respiratory function, while the heart's action continues ; secondly (the circulation being thus maintained), the contact of venous blood with the nervous centres, by the deleterious qualities of which their sensibility is depressed ; and thirdly, a stagnation in the lungs, through which such blood soon ceases to be transmitted. It is evident, under these circumstances, life may often be preserved, if we reverse these conditions, by substituting for natural inspiration an artificial current of air, by which there may be effected in the pulmonary tissues those changes in the blood, necessary to enable it to traverse

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\* In stating that no mechanical impediment to the entrance of the air exists at birth, it is of course presumed, that the membranes, and the mucus which blocks up the nares and throat, have been removed. Independently of these, however, it should be remarked, that in cases of universal congestion, the inordinate quantity of blood with which the lungs are loaded, may, perhaps, offer direct opposition to inhalation (Billiard) ; but it is evident this state is removeable, not by artificial distention of the air cells, but by withdrawing some of the superabundant fluid.



them, and by which it may be purified of the noxious constituents that are acting as a poison on the system. By thus temporising, an opportunity, which speedy dissolution would otherwise deny, is afforded for the employment of remedies capable of removing the comatose condition, and in this way the vital principle may be resuscitated and sustained.\* But in the child which has never breathed, things are differently circumstanced. In it the nervous apparatus has not yet been supplied with blood which has undergone the process of aëration ; for although some alteration is certainly produced in it, by the action of the placenta and foetal liver,† and perhaps the thymus gland, during intra-uterine existence, it preserves throughout those characters, which are denominated venous, and “ both in the arteries and veins, differs in no perceptible respect from the venous blood of the adult.”‡ In the child still-born, therefore, it is not necessary to take into consideration, as an element in the production of a fatal event, the destructive effects of black blood, if conveyed by arterial vessels, so apparent in after-life; (otherwise there could never be such an occurrence, as the unaided revival of an infant, twenty-four hours after being laid aside for dead§) ; and on that account the circumstances are not so urgent as to require us to immediately adopt measures for its purgation, by beginning our efforts for restoration at the lungs, but they should be directed rather to the brain and its peripheral extremities, whose blunted sensibility is the cause of the non-performance of respiration. Then, indeed, it may be useful, if breathing be delayed, to blow into the lungs, as experiment has proved, that expansion and contraction of the chest, and the vital actions consequent thereon, directly aid in the circulation of the blood. But this

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\* On this principle, artificial respiration is worthy of a trial in certain cases of apparent death from apoplexy.

† See a paper on the Functions of the Foetal Liver, by Lee and Prout, in the Philosophical Transactions for 1829.

‡ Müller's Elements of Physiology, vol. i. p. 337. London, 1840.

§ Lancet, vol. xv. page 686.

process, at such a time, may be aptly compared to touching the pendulum of a clock, which has been wound up, but still remains at rest ; it gives the impetus, whereby the machinery—ready to maintain its own actions, once it is set a-going—is thrown into motion ; whereas, to *commence* with artificial inflation would more resemble making the pendulum vibrate, before the other parts of the apparatus are in a condition to perpetuate the movements thus begun. I dwell on this point, because I believe that the latter mode of treatment is much more frequently adopted than it ought, owing, in a great measure, to the term asphyxia being thus incorrectly used—an error, which may probably be attributed to the foetus before birth being immersed in a fluid ;—and I have no doubt, that injury is often, by this operation, inflicted on the texture of the lungs, so delicate in infancy.

CASE XI.—Thus in the case of M<sup>c</sup>Mahon, admitted 21st May, 1839, in labour for the first time, when the os uteri was but one-third dilated, a coil of the funis descended before the head, then only entering the brim of the pelvis. The cord was returned, and maintained so by the introduction of a large piece of sponge ; and two hours and a half afterwards the child was expelled. It was still-born, and required the abstraction of blood from the umbilical vessels, the warm bath, and ultimately artificial respiration, to reanimate the vital principle. By those means it was in some measure restored ; but, in spite of treatment, expired about eleven hours subsequently. On inspection, the lungs, notwithstanding that the operation had been performed with the utmost care, presented extensive appearances of emphysema, and points of extravasated blood. The lungs, heart, and thymus gland, conjointly floated, when thrown into water.

One of the chief defects of artificial breathing is, that in it the chest is expanded by the pressure of the injected air, whereas, in natural breathing, the air enters in consequence of its spontaneous enlargement. But, besides the local injury which

may be thus done, I am confident resuscitation is in many instances actually arrested by resorting to mechanical insufflation, instead of being aided thereby; for Leroy d'Etoiles has shown by experiment, that although inflation of air into the lungs after submersion, is one of the best remedies for restoring life, still if it be not managed with great skill, restoration may be prevented by the very means used. Whatever be the remedies we feel ourselves called on to employ, they should be assiduously persevered in, as wonderful recoveries are sometimes made, even after all reason for hope has apparently vanished.\*

Death commencing at the lungs, therefore, or what should alone be termed asphyxia, is *not* of frequent occurrence in young infants. It is principally observed in the event of a woman, either accidentally, or by design, overlaying her child, or from its birth taking place unperceived; an occurrence, I would observe, peculiarly liable to happen during the stupor which attends puerperal convulsions. The relaxing treatment adopted in this complaint, renders the soft parts so yielding, that the foetus sometimes slips away, without almost an effort on the part of the uterus. This happened with a case I was myself appointed to watch (Flood, admitted 24th May, 1839); we should, therefore, at such times, be on our guard. In the following instance, however, it occurred while the woman was in the perfect enjoyment of her senses.

CASE XII.—Tighe's fifth child was born on the 18th of June, 1839, unknown to the attendants, and without any outcry on the part of the mother, who supposed it was only a motion from the bowels she had had. It lay for some time under the clothes, so that when discovered, it was with difficulty revived.

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■ Desormeaux complains of his want of success from inflation of the lungs, even when carefully employed, and places more dependence upon means calculated to excite the respiratory muscles to contract.—Art. Nouveau-né, Dict. de Médecine, ou Repert. Gener. des Sc. Med. Tom. vingt-unième, p. 154, Paris, 1840.



A few hours after it appeared very feeble and dark coloured ; heart beating irregularly. Some wine whey was given, by which it seemed to be revived ; during the day, however, it was attacked with convulsions ; a leech was applied to the occiput, and three baths at intervals given it. Next morning it appeared more lively and able to suck ; its bowels had been freed by means of calomel followed by oil. On the following day it was quite well.

CASE XIII.—In an instance I lately saw in the North Dublin Poor House, with my friend Dr. James Duncan, a child, a few hours after its birth, and while in good health, was placed lying in its mother's arms in bed. Twenty minutes afterwards it was discovered, that, probably through inexperience, for it was her first, she had allowed it to turn on its face under her side ; when taken up it was quite dead. On inspection, there was a purple red colour of the skin ; the lungs and heart removed together, floated when placed in water ; the lungs were congested throughout, the lower lobes of both quite solid, as if unexpanded by respiration ; about an ounce and a half of serum in the pericardium ; the heart was healthy, its right cavities full of blood ; thymus very large ; head not examined.\*

We should remember, that in cases of suffocation the heart retains its irritability for some time after the circulation has ceased, and we should not, therefore, be dissuaded by that circumstance from resorting to artificial respiration, and diligently employing other means for restoring suspended animation. Convulsions, if they occur during, or after the struggle for life, will require to be treated by local depletion, and the other measures already pointed out.

When an infant comes into the world, the mouth and

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\* On the occasion at which this paper was submitted (in a more condensed form) to the consideration of the Obstetrical Society, Dr. Evory Kennedy remarked, that in cases such as the above, death seemed sometimes to be produced, not by the mouth being covered, but by the neck bending upon itself, in consequence of the child's head slipping off too high a pillow on which it had been placed.

pharynx are generally clogged by mucosities, which, if not removed, may impede the entrance of air, and produce asphyxia. The same consequence sometimes results, as first pointed out by Héroldt of Copenhagen, from the trachea and bronchial tubes being filled with liquor amnii, a fluid that the observations of Leclard tend to prove is actually respired, instead of air, by mature embryos.\*

CASE XIV.—Lynch's child, born in the Lying-in Hospital on the 8th October, 1838, was for three hours in a very perilous condition, almost suffocated by viscid mucus which had been permitted to remain in its throat. In this case fremissement was distinctly felt all over the thorax. By removing the mucus, which was withdrawn in strings of great tenacity, by rubbing the chest, and keeping the child lying on the lap with the head depending, it was with a great deal to do brought round to a satisfactory state.

CASE XV.—August 9th, 1839. Dunn's child, born last night at 11 o'clock, after a natural labour, is this morning dark-coloured and purplish, a tint, which is more marked on the face than the body; pulse 80; respirations 36 in the minute, irregular; first sound of the heart prolonged, interval considerable. It could never be made to breathe freely, and it died next day. On examination, the viscera of the chest and abdomen were found healthy. The foramen ovale open, but not large; lungs but little distended; air passages much obstructed by fluid. The vessels on the surface of the brain greatly distended; some effusion of blood and serum at the posterior part and base of that organ. In the substance of the choroid plexus was a portion of adhesive yellow fibrine, resembling adipose substance, but more firm.

Such cases require the careful removal of whatever mucus may be within reach, either by the finger, or more easily, according to Gardien, with a pledget of lint dipped in a solution of

common salt. When the trachea is blocked up, it is proposed by Schéele to withdraw the fluid by means of a flexible tube, to which a pump is attached.\* A more feasible method is to keep the head dependent, rub the thorax, and, if these measures fail, we may administer a gentle emetic. After apparent recovery, they must be carefully watched, lest they fall into what may be termed secondary asphyxia.

Under this head should be included death from spasm of the glottis, but to that disease I shall only allude, as I am unable to throw any additional light on its pathology. I have seen cases of the affection, irrespective of that, which may complicate local inflammation, wherein were discovered after death either enlarged glands, as described by Ley, or the thymus of inordinate size, to which attention has been drawn by Kopp and Hirsh of Königsberg, and by Dr. Montgomery; but in many I believe the opinion of Sir Henry Marsh to be perfectly correct, that it is merely a functional disease at first, but when it increases in severity, and when general convulsions arise, the brain and its membranes have become involved.†

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\* Bibliothèque Germanique, tom. iii.

† I shall here relate an interesting case, by permission of Dr. James Duncan, under whose skilful care, at the N. D. Poor House, I witnessed it, as it is allied to the disease under consideration.

Lawlor, a middle-aged woman, nursetender in one of the hospital wards of that institution, was affected with hoarseness, apparently the result of cold, about the beginning of the month of August, 1842. She was not confined to bed till the 18th, when she presented the following symptoms. Urgent shortness of breath, and great anxiety of countenance; points to the top of the sternum, where, she says, there is an obstruction to her respiration; little cough, occasionally expectorates large lumps of black matter; heart's action loud, and tolerably strong; bruit de soufflet; a set of dilated veins over the front part of the sternum, where, and particularly under the right clavicle, some fulness is perceptible. Nostrils feel stuffed.

19th. Was very ill last night, and unable to lie down; lost her voice, and felt as if something sticking in her throat was choking her; thirst, but she is afraid to drink, lest she should suffocate in the act; no obstruction, once the ingesta pass the top of the larynx, nor has she ever felt as if the bit stopped in the passage;



But there seems yet another mode, in which death, commencing in the respiratory organs, may be produced in the young infant. As death beginning at the brain results from tedious labour, so a birth of unusual rapidity may be the cause of death, commencing at the lungs, apparently by not giving them time to prepare for the performance of their new function. We are indebted to Joerg of Leipsig, for first pointing out the injurious consequences to the child of too speedy a delivery. He conceives that in such cases, in consequence of the inferior degree of compression to which the placenta is subjected, a sufficient tendency is not given to the foramen ovale to close, nor is a necessity for respiration felt by the system. After birth then, a portion of the lungs alone becomes filled with air, while the remainder continues in a foetal state, a condition to

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there is a raucous sound on inspiration, expiration free, breathing quick ; chest sounds well, and the air cells are fully distended ; epiglottis does not feel thickened, no tenderness externally ; heart's action feeble and frequent, some souffle with the first sound, but it is doubtful whether it is persistent : spit up some black matter last night ; epistaxis from left nostril, which she felt had the effect of clearing it ; expression still anxious ; aspect pale and cachectic ; tongue dry and brown.

20th. Considerably less distress ; slept well lying down ; breathing less frequent, and more equal ; less stridor ; complains of rawness of the throat ; sputa brought up by an emetic consisted of inspissated mucus with some blood and black matter. Heart's action more tranquil, 92 ; still slight souffle with first sound, epistaxis returned ; tongue as before ; no difficulty in swallowing ; back of the pharynx presents streaks of a dark colour ; neither uvula nor palate swollen.

21st. Suffered greatly from dyspnoea during the night ; rather less stridor. 9, P. M. Sleeping constantly and heavily, notwithstanding that she has been bled and cupped ; blood drawn cupped and buffed ; can scarcely swallow ; chest is very much contracted and expanded at each respiration ; expiration, as well as inspiration attended with a loud sound, like that heard in tracheotomised cases ; pulse 96.

22nd. Dyspnoea is rather less urgent ; is constantly falling asleep ; inspiration accompanied by a loud noise, expiration whistling, both forcible. Is very reluctant to swallow ; sometimes a drink will only get as far as the pharynx, when it is rejected.

which he has given the name of atelektasis, and which may, amongst other ill consequences, give rise to apoplexy, depending on the want of duly oxygenated blood.\* For example :

CASE XVI.—Murray's child, born 16th August, 1839, after a labour, the entire of which occupied only an hour, respired very imperfectly at birth. An attempt was made to distend the lungs artificially, which, with the aid of the warm bath and galvanism, was partly successful. The child, however, continued very feeble, although stimulants were applied, and two days afterwards was seized with convulsions. A leech was applied to the head, and blue pill with James's powder given ; it died at four o'clock next morning.

CASE XVII.—June 5th, 1839. Kelly's child, her eighth, born three days ago, after a labour of only half an hour's duration,

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23rd. Died at 4 o'clock this morning, after much dyspnœa succeeded by convulsions.

*Post Mortem.*—Body plump ; layer of subcutaneous fat very thick ; considerable congestion of lungs, which were throughout healthy, except at the anterior part of the base of the left lung, where was the remains of an old cavity, filled with crustaceous matter. Thyroid gland very large, and its third lobe much more developed than natural ; epiglottis a little thickened, some punctuated redness on the mucous membrane of the larynx and trachea ; no other morbid appearance about the rima. On removing the parts, a tubercular appendage was found growing from the sixth intercostal cartilage, rather to the right of the median line ; it was about the size of a large pea, and close to it was a mass of tuberculous deposit, as large as an ordinary lemon, which in a great measure surrounded the trachea, and must have encroached considerably upon its calibre. In the foregoing case then it would appear, that the pressure of this mass, and probably of the enlarged thyroid, upon the nervous trunks, was capable of producing a difficulty, both in the ingress and egress of air at the top of the larynx, and thus gave rise to sounds corresponding with those heard in spasm of the glottis in infants. It is, I think, a particularly interesting case, as neither Ley nor his commentator (*Dublin Journal of Medical Science*, vol. ix. p. 303), whom from the initials affixed to that excellent review, I presume to be Mr. W. H. Porter, the distinguished author of "The Surgical Pathology of the Larynx," has ever seen laryngismus stridulus thus produced in the adult.

\* Joerg Die Fötuslunge im gebornem Kinde, &c. Grimma, 1835.

has continued since birth of a dark colour ; skin cold ; breathing difficult ; a tendency to spasm, particularly when drink is given to it ; discharge of a greenish colour from the mouth, which is thickly coated with muguet ; sounds of heart normal. A leech over the sternum ; wine whey. Next day the child appeared declining ; colour of skin not so dark ; great difficulty in swallowing, the pharynx being apparently thrown into spasmodic action, the fluid can only make its way a short distance down when it is regurgitated. Stimulants were continued, but it gradually lost the power of swallowing, and died on the 10th inst., apparently in great pain. On post mortem examination, the lungs were only partially permeated by air, the remainder maintaining their original state ; the foramen ovale continued pervious ; the vessels of the brain much distended.

In cases of this kind, and indeed in all, there is one general rule to be observed, never to tie the cord as long as pulsation exists in it, until respiration is well established ; and never to rest satisfied in any case, until the child by its loud cry, the “*vagitus intra muros*” of the Scotch law, convinces us that its lungs are fully able to perform their function. At a later period, in instances such as those I have recorded, our treatment must consist in the use of stimulants internally and externally, together with remedies directed against the apoplectic and inflammatory consequences to which the brain and lungs are both liable. In detracting blood from the chest, the best situation to apply leeches is under the axilla, as the subcutaneous venous plexus there communicates directly with the vessels of the thoracic cavity, a remark which has been made by Billiard.

Instances we sometimes see, in which, after birth, the heart of the child is laboured and tumultuous in its action, and apparently oppressed by the blood that flows upon it ; and, in such cases, congestion of the surface, convulsions, and even death may ensue. They probably arise from a *tendency* to closure of



the former channels not being established (for it does not appear necessary they should be actually closed for some days), or from a feeble condition of the heart itself. The same symptoms are often, in the hands of inexperienced attendants, induced by applying a ligature to the cord the moment the first gasp is observed, and before the respiratory function has come sufficiently into action to open a new course for the circulation.\* They require leeching over the cardiac region, &c., for their removal. But syncope, or death commencing at the heart, in the newly born as in the adult, is best exemplified by the effects of loss of blood. Hæmorrhagic discharges from the uterus during gestation or labour, may, it is well known, be a cause of death and premature expulsion to the foetus, or of deficient vitality in the child at birth, even if carried to the full time. We are not to suppose this result is produced by a direct detraction from its system; for experience proves these beings, though in such close coaptation, to possess circulations so independent of each other, that although the parent may bleed even to the extinction of her life, the foetal vessels are not thereby deprived of their contents; a fact first demonstrated by Wrisberg in his experiments on cows in calf.† It is strange, therefore, to find so distinguished a writer, as Marc, assert, that in cases of detachment of the placenta, and of ruptured uterus, the foetus becomes bloodless.‡ But Ladmirault has proved that in the former case, this morbid condition ought not to be attributed to an empty state of the vessels, for in his post mortem inspections, on opening the heart and great vessels, a large quantity of blood flowed from them.

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\* The injurious consequences of tying the cord too soon, are noticed by Eberle in his "Treatise on the Diseases and Physical Education of Children," Philadelphia, 1837, p. 86.

† See also Rigby in Tweedie's Library of Medicine, vol. v. page 34. London, 1841.

‡ Dans l'hémorrhagie ombilicale produite par le décollement total ou partiel du placenta, par la rupture de la matrice, le foetus présente tous les signes de l'anémie."—Art. Infanticide, Dict. de Med. ou Repertoire Gen. des Sc. Med. tom. vi. p. 383.

It should rather be referred to a deprivation of that peculiar influence, (which some, without sufficient reason, have denominated the power of oxygenation,) exercised by the placenta on the fluids carried to it by the umbilical arteries. In the latter instance too, this, which may be looked on as a spurious asphyxia, must be the cause of death, when the uterine contents escape into the abdomen ; but even when the foetus remains in utero, the fatal event is not referrible to a drainage from the vascular, but apparently to a shock upon the nervous system, possibly transmitted from that of the mother, extinguishing the vital powers, by whose means the blood is moved, just as occurs in concussion ; and thence arises the pale, flaccid appearance of the body. On this account, we cannot, with strict propriety, include in this section the still-born condition, if consequent on *profuse* metrorrhagia, nor following laceration of the womb. But if we are of opinion, as indeed is proved almost beyond a doubt, that the office of the placenta is, not to be a medium of continuity between their circulatory organs, but to transmit from the one individual to the other, and elaborate in their passage, nutrient particles, we may readily admit, that the feeble, puny, almost lifeless state, in which the infant so frequently comes forth,—in cases, wherein the placental function has been interfered with by hæmorrhage in smaller quantity but frequently repeated,—does approximate to true syncope, the consequence of the offspring having been exposed to what may, without inaccuracy, be termed starvation.

To syncope we may also, with much probability, assign the imminent danger which impends over the foetus, when it presents by the feet. Under such circumstances, it is apparent the cord is very liable to suffer such compression, as will instantaneously put an end to the transmission of blood through it ; even more so, than when the head being engaged in the vagina, the pelvis is sufficiently roomy to permit a coil or two of it to prolapse. Now, the consequence of the funic circulation being suddenly annihilated, must be, that the supply of blood to the left side of the heart is at once cut off, just as if in the adult the pulmonary

veins were rendered impervious, and those cavities, continuing to contract, speedily empty themselves of their contents, and are then disabled from maintaining any longer the normal amount of pressure on the brain. While, though the escape of blood from the system is at the same time equally arrested, the *vis a tergo* being no longer in action, the capillaries do not become sufficiently distended to give more than a livid tint to the surface. The child at birth, therefore, presents all the appearances of a deep faint; and on opening such bodies, the blood is found to have deserted the left side of the heart, and accumulated in its right cavities and the great trunks. But we have already seen that in other cases of funic presentation, the infant exhibited all the signs of congestion. Those were instances in which, from the cord being subjected to only a moderate or an intermitting force, its pulsations could be felt in the vagina becoming more and more laboured, until they ultimately ceased. There seem then to be two modes whereby compression of the navel-string may prove detrimental to the foetus; firstly, resulting from a total obliteration of its vessels, an almost instantaneous suspension of life, beginning at the heart; and, secondly, a comatose condition, slower in its approach, having its seat in the brain. In the same way, too, it would appear, that artificial delivery of a footling, if not dexterously performed, is fraught with a double danger to the child. Attempts at extraction, made at an improper time, may be attended by a perilous failure of the heart, and from force, indiscreetly applied, may arise a concussion of the spinal marrow, equally deplorable in its results.\*

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\* Intra-uterine life is sometimes accidentally extinguished by the mother leaning against the edge of a table, for instance, and thus obliterating the funic vessels, if exposed to pressure, in consequence of the cord encircling a limb of the foetus. They are cases in which the funic souffle would have been audible with the stethoscope. A tight knot on the navel-string may have the same effect, as noticed by Smellie, Osiander, and others. See Hannay's case, *Lond. Med. Gazette* vol. xxvii. p. 122.



But death, having the heart for its salient point—as indicated by paleness and collapse of the countenance, cold extremities, pulse becoming gradually imperceptible, while respiration continues to the last—is still more plainly exemplified by cases wherein, either from inattention at the birth, bleeding from the cord occurs, or when the same accident attends ulceration at the umbilicus, after the navel-string has dropped. In an instance which occurred to myself some years ago, I used a rather broad piece of tape to tie a cord, which was very thick and gelatinous. Before I left the house, I fortunately went to look at the child, which, after being dressed, had been laid in a cradle, when I found it blanched, and in a state closely bordering on convulsion. The cord having quickly shrunk, the string had slipped off, and bleeding to an alarming extent ensued, without attracting notice. By the aid of cordials, and sedulously maintaining the heat of the body, the child gradually came round; but the occurrence gave me, at the time, a great fright, and impressed upon my mind a lesson never to be forgotten. I now always, to make assurance doubly sure, apply two ligatures to the foetal end of a very thick funis, pressing out, at the same time, the gelatinous matter, and I never neglect the precaution my old preceptor, the late respected Professor Hamilton, used to recommend to his class, namely, while handing the child, after its separation from its mother, to the nurse, to desire the latter, in a voice which can be heard by others as well as herself, to examine frequently that all is right with the navel.

The treatment such cases will demand, whether attended or not by convulsions, will be similar to that, which, under parallel circumstances, would be required in the adult; the observance of the horizontal position, the application of heat, and the use of stimulants (with opiates in some instances), and of appropriate sustenance, being the chief indications. Very much the same plan should be adopted when the infant comes into the world, feeble from deficient nutrition; but when still-born from this cause, I apprehend we can entertain less hopes of recovery,

than in other forms of apparent death. However, we should instantly attempt it by means of external warmth, stimulating frictions, wine injections, and other measures calculated to recall, if possible, the vital spark. Artificial inflation may here be given an early trial, but I fear will not often be found of much avail. In arrested circulation from pressure on the cord, a much better prospect of success attends the performance of the operation, and this is just the case in which its timely and continued use is likely to be followed by the happiest results, owing to its power of unloading the venous trunks, and renewing the contractions of the heart. But it need not be resorted to, till we have tried slapping the buttocks, dashing cold water on the surface, and other such measures.\*

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\* To show how indiscriminately the term asphyxia has been used to signify the still-born condition, regardless of the function primarily engaged in its production, thus making the absence of respiration, a mere symptom, the generic characteristic of the morbid state, I shall quote the following passage from a work of acknowledged excellence. “L’Asphyxie des nouveau-nés,” observes Savary, “succède ordinairement à un accouchement laborieux, et dans lequel la mère a essuyé des pertes considérables. L’enfant vient alors au monde *ex-sanguin*, pour nous servir de l’expression du célèbre Baudelocque. Mais ce n’est pas le seul cas où cet accident se présente ; il peut tenir à la constitution délicate du fœtus, et dépend souvent, ou presque toujours, suivant M. Freteau, de la compression du cordon ombilical pendant l’accouchement ; aussi est-il plus commun lorsque l’enfant vient par les pieds. Dans cet état l’enfant est pâle, ou livide, ses chairs sont flasques, ses membres souples, et sans mouvemens ; il ne respire point ; on ne sent point de battemens le long du cordon ombilical, ni à la région du cœur ; tout, en un mot, semble indiquer, que l’enfant a cessé d’exister.” This author, however, more correct than many others, has properly distinguished the condition here depicted from that of apoplexy.—Art. Asphyxie, Dict. des Sciences Med. tom ii. p. 369.

Gardien, in his chapter entitled, “Soins à donner à l’enfant nouveau né,” one of the few elaborate articles on this subject, has fully exposed the impropriety of using the term asphyxia, but with little more accuracy he has referred the symptoms usually classed under it, in every instance, to syncope. In so doing, it appears to me, he has fallen into several errors ; firstly, throughout his arguments he has assumed that the maternal and foetal circulations are continuous ; his words, in speaking of cases of profuse hæmorrhage from the uterus, are : “L’état *ex-sanguin* dans lequel naît l’enfant dépend évidemment de ce qu’il n’y a plus de proportion

We have already shown that injury inflicted on the spinal marrow during delivery may extinguish life by directly arresting the heart's action; and we have now to notice, that as the brain is liable to be the seat of congestion in the child newly born, so may the medulla spinalis in a similar way be deranged. The consequence of such a condition must be to paralyse the organs of respiration, for the medulla oblongata is the source from which the nervous influence for the respiratory motions is derived, and the spinal cord is, as it were, the trunk of the nerves which arise from it.\* Ollivier indeed states, that this function is entirely dependant, at least in mammiferous animals, on the spinal marrow; and Wilson's experiments have proved, that the action of this portion of the nervous system on the heart, is not so direct as on the function of the lungs.† After this morbid state has been in a great measure removed by treatment, a minor degree may persist, or may at a somewhat later period arise, from which, as from its congener in the brain, injurious consequences will result. Indeed,

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entre le sang qu'il reçoit de sa mère, et celui qu'il envoie au placenta :” secondly, while he shows the fallacy of the opinion entertained by Chambon, Capuron and others, that total obliteration of the cord gives rise to apoplexy, he does not recognize the difference in the mode of death in that case, and when it is only partially compressed : “ si, dans le cas,” he observes, “ où le cordon accompagne la tête l'enfant présente quelquefois le *facies*, propre à celui qui est apoplectique, c'est que la tête a été comprimée en même temps que le cordon, et avant que la pression fût assez forte sur ce dernier pour y intercepter le cours du sang;” not perceiving, that it is in cases of large pelvis, and when the head is consequently exposed to actually the least degree of pressure, prolapse of the funis is most liable to occur with that presentation : and thirdly, he makes no allusion whatever to death from concussion, nor to a morbid state of the spinal marrow. In the following sentence he is decidedly incorrect : “ Jamais on n'a vu l'enfant naître pâle, décoloré, parce que la tête, en traversant les détroits du bassin, a été soumise à une pression plus ou moins forte.”—*Traité d'Accouchemens*, tom. iii. page 130–152. Paris, 1824.

\* Müller's *Elements of Physiology*, vol. i. p. 364, 2nd edit. London, 1840.

† Ollivier *Traité de la Moelle Epinière*, &c. vol. i. p. 64. Paris, 1823; Wilson in *Phil. Transac.* for 1815.



Ludwig and Frank\* have pointed out, that even in a state of health the absence of valves in the spinal vessels, and their peculiar distribution on the surface of the cord, must predispose to a remora of the venous blood in the adult, particularly as that fluid must ascend in opposition to gravitation. The vessels too are equally pressed on by the cerebo-spinal fluid; but any cause, which tends to increase or diminish its normal quantity, may readily be conceived to favour venous congestion.† These conditions exist equally in the infant after birth, and in it, therefore, engorgement of the spinal canal is by no means uncommon. Cases of this kind, from the violent spasms which attend them, frequently bear a great resemblance to that more fatal malady, trismus nascentium; but they differ from it in presenting a moveable condition of the jaw, and a power of deglutition in the intervals of the fits. The following was probably a case of simple spinal apoplexy.

CASE XVIII.—Doyle's child, a full grown infant, was born in the street while its mother was on her way to the hospital, at 1 o'clock on the morning of the 14th November, 1838, and on its admission immediately afterwards, appeared in a very weakly state. It was nearly motionless; its breathing slow; the surface cold and blue. By the application of heat an improvement in its circulation was effected, but still it did not cry out. A grain of calomel was given, followed by oil, and brought away copious evacuations of the usual black colour; wine whey was administered occasionally. It remained pretty nearly in this state with occasional low whining till the next morning. It was then unable to suck, and assumed the yellowish tinge seen in infants about this period. About 12 o'clock it was first observed to be convulsed. The fit set in with a low screech, which was suc-

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\* Ludwig Advers. Med. Prac. tom. i. p. 711. Leipsig, 1770; Frank Delect. Opuscula, tom. xi. de vert. column. 1792.

† See Ollivier, Op. Cit. vol. ii. page 448. Magendie's experiments on the effects of drawing off the cephalo-rhachidian fluid will be found in the Lancet, vol. xi. page 725.

ceeded by alternate spasmodic contraction and relaxation of the limbs; the fingers were alternately extended and drawn spasmodically into the palms of the hands, with the thumbs strongly flexed over them; the body was bent forcibly backwards. During its continuance the respiration became much slower, the surface of the body and face livid, and the eyelids were alternately opened and shut. These paroxysms, each lasting about five minutes, continued in rapid succession, with a gradually diminishing interval, until at length a few seconds only intervened. As the fits became more severe and frequent, the surface lost its yellow tinge and became pallid. At half past 1 o'clock, A. M., the succeeding day, the convulsions appeared to subside a little, but they were followed by an increased degree of exhaustion, and the child expired at 2 o'clock immediately after the cessation of a paroxysm.

In the following example in which cerebral and spinal congestion were combined, the resemblance to trismus was still more striking, but yet it did not present the firmly closed jaw, nor the angles of the mouth drawn directly backwards, so characteristic of the latter disease.

CASE XIX.—Reilly was in labour of her third child for an hour and a half on the 11th September, 1838, when the funis prolapsed. As it was pulsating, and the head pressing strongly on the perineum, no artificial assistance was rendered. On the birth of the child its vitality was with difficulty restored, nor did it appear perfectly revived for above two hours. At 5, A. M., on the 12th September, fifteen hours after birth, it was seized with clonic contraction of its limbs, ushered in by a scream, the hands and feet being strongly flexed and remaining so throughout the paroxysm; mouth widely open, lower jaw firmly fixed in that position; complete oposthotonos; respiration impeded, the whole surface of a dark colour. Warm baths, leeching the back of the neck, calomel, and assafoetida injections were employed. 4, P. M. Has had many convulsions during the day, the interval between them being generally only of five or ten minutes du-

ration. During the fits, which commence with a tremulous motion of the lids and eyes, the features become black, the mouth is forcibly opened, and the child works strongly with the feet and hands. At present, a paroxysm having just ceased, the hands are closely shut, the thumbs overlapping the extremities of the first two fingers, and the forearms are strongly flexed. A tremulous turning of the head from side to side exists, and twitchings of the muscles of the face, accompanied with opening and shutting of the mouth, which is occasionally drawn to the right side. The child can swallow only half a teaspoonful at a time, and the injections are not retained for a moment. 9, P. M. It is now lying in a state of quiescence; the conjunctivæ are much injected; on the approach of a candle the pupils act, but the infant does not appear sensible of the light; the arms are not so firmly drawn up, and though fits occur occasionally, the intervals are more prolonged. A draught of turpentine, oil, and tincture of assafoetida administered, and calomel continued in doses of half a grain every third hour. Next morning (the 15th) convulsions still existed, and the child died during the course of that day.

*Post Mortem made 28 Hours after Death.*—Great and general lividity of the surface; rigidity of the limbs; hands firmly clenched. On cutting through the dorsal muscles a considerable quantity of fluid blood escaped, and still more was infiltrated into the cellular tissue about the dura mater of the cord; this membrane was itself congested, and the vessels in the spinal canal, and particularly those described by Breschet, between the dura mater and the posterior surface of the vertebræ, were gorged with blood and presented a beautiful appearance. There was some serous effusion into the theca, but the spinal marrow was itself apparently natural. The sinuses of the brain were distended with fluid blood; blood mostly fluid was effused between the dura mater and the two parietal bones, detaching the membrane extensively from them. A small clot of blood lay upon the arachnoid, covering the posterior part of the middle



lobe of the right hemisphere : the vessels of the pia mater were also much injected, and the brain throughout presented, when cut, more bloody points than natural. All the cavities of the heart were full of blood ; the ductus arteriosus was wide open, and no effort had apparently been made to close it, or the communication between the auricles. The lungs were much congested. The liver was black from the quantity of blood it contained ; the gall bladder distended with bile ; the ductus venosus shrunk, but not obliterated ; the other viscera healthy.

It is curious that in infants we scarcely ever find circumscribed cerebral hæmorrhage. Effusion, when it does occur, is almost always on the surface of the membranes, which perhaps may account for the infrequency of permanent paralysis in cases, which survive the apoplectic seizure. I shall now contrast these cases with two of pure Trismus, that occurred in the hospital about the same time, and of which I was able to obtain post mortem inspections.

CASE XX.—Tankard's child, born on the 16th of August, 1838, after a natural labour of three hours, was quite well up to 3 o'clock, A. M., on the 21st, when it began to whimper. About 4 o'clock the nurse observed its jaws firmly closed, and it was unable to suck. It had a bath and calomel powder, after which it slept till 6 o'clock, when it awoke in a scream. At 10 o'clock visit, the jaws were closely approximated, the lines upon the chin, arising from contracted muscles,\* distinctly marked ; the lips compressed against the teeth, the corners of the mouth being drawn directly backwards, and the depression naturally existing in the centre of the upper lip thus obliterated ; the nostrils were widely open ; the lids half closed ; the eyes somewhat turned up, half the cornea being concealed under the upper lids, but the eyes themselves moveable ; hands and arms flexible ; the back of the neck stiff. There was an unhealthy appearance of the umbilicus, from which the cord had separated the day before. One grain and a half of calomel was administered, and a bath. At one o'clock all those symptoms persisted, and the rigidity had affected the upper extremities

also, the thumbs being buried in the palms of the hands. The bowels had been once moved by the medicine ; dejections dark green ; abdomen distended. Following out the treatment recommended by Dr. O'Beirne, who indeed saw this case, a tube was first passed up the rectum to bring away flatus (an operation, which did not prove as difficult, as the apparently spasmodic state of the sphincter would have led one to expect), and a short time after, there was injected through it half of an infusion, made with three grains of tobacco to eight ounces of boiling water.

On visiting the child an hour after this enema, the fingers were still clenched, it was constantly and loudly moaning, but in a hoarse tone. Spasm had then attacked the lower extremities also. The eyelids usually remained half open, and, on an attempt being made to separate them still more, closed spasmodically ; the eyes were not affected. The child made now and then momentary efforts to throw itself backwards—efforts, which seemed to be made with the head and spine simultaneously ; the arms being, at the same instant, drawn spasmodically towards the medium line of the body, and the fingers and thumbs more firmly clenched.

7 o'clock. Has just had a strong tetanic fit, in consequence of the nurse endeavouring to make it swallow. She says it sometimes lies for twenty minutes, when undisturbed, without having one, but the moment a drop of fluid is put into its mouth, all its extensors are thrown into action. The last, she describes, as the most violent it has yet had. The pulse is scarcely perceptible. Extremities cold. The remainder of the injection was thrown up.

At 9 o'clock, it appeared somewhat better. It certainly could open its mouth rather more, and the upper extremities were, perhaps, less rigid ; but the hamstrings were just as tense, and the big toes turned as forcibly upwards and inwards. The child was pale, pulse very weak. The tube was again passed, to bring away flatus, and some chicken broth thrown up. It died, however, at 4 o'clock next morning.

*Post Mortem made eight Hours afterwards.*—In the spinal

column was found a considerable quantity of fluid blood, effused into the cellular tissue around the dura mater, which was itself healthy. The vessels beneath the arachnoid appeared little more distended than usual; spinal marrow unaltered. Rather more distention of the cerebral sinuses than natural, no extravasation; brain not particularly engorged; ventricles healthy; falx and tentorium very vascular.

CASE XXI.—Leary's child, born on the 21st August, 1838, was attacked with trismus on the 4th September, at four o'clock in the afternoon. In this case, the treatment recommended by Dr. Breen was adopted, namely, small doses of laudanum with calomel, followed by castor oil and turpentine; but it died at five, P. M.

*Post Mortem made next Day.*—Great and general lividity of the surface, especially of the extremities, which were in a state of semiflexure, and exceedingly rigid; the fingers firmly clenched, and the thumbs closed on the palm. There was great rigidity of all the muscles, and even some degree of opisthotonos remained, the loins being raised for some distance from the flat surface, upon which the child was laid; the jaws were not quite closed, but firmly fixed; the umbilicus was not healed, though the cord had dropped off, and there was slight oozing of sero-sanguineolent fluid, from the orifice of the umbilical vein. This vessel, however, was not inflamed—a condition, I would observe, I have seen distinctly marked in one case. The whole tract of the spine was occupied by semi-coagulated blood, effused in great abundance into the cellular tissue, surrounding the dura mater; less copious within the arachnoid, the vessels beneath which membrane were also much distended. The dura mater of the brain was healthy, but there was considerable effusion of blood into the sac of the arachnoid at the base of the brain; the vessels on the surface were congested; the brain itself vascular. The pleuræ, and substance of the lungs, presented a congested appearance; all the cavities of the heart were full of blood, and the foramen ovale and ductus arteriosus were both open, nor did there appear to have been any attempt to close them. The vis-



cera of the abdomen were healthy ; umbilical vein pervious ; ductus venosus contracted, but not obliterated.

Rachitic congestion, then, is characterized by convulsions of the limbs, and sometimes of the face, and more particularly by tetanic spasms, generally assuming the form of opisthotonos. It requires the same remedies for its removal as congestion within the head, namely, local abstraction of blood, counter-irritation, calomel, probably combined with James's powder, &c. As to the nature of trismus, it is not my intention to offer any remarks, nor shall I canvass, at such a moment, the correctness of the opinion, advocated by our much-to-be-lamented friend, Dr. Colles,\* that it is actually traumatic tetanus, originating in unnatural separation of the funis. The cases, I have given, show how similar are the symptoms, and how close a resemblance exists between the post obit appearances presented by infants, who have died of that disease, and of mere ordinary cerebro-spinal congestion ; and I own myself altogether incapable of determining, why it should be, that the latter is amenable to treatment, while the former is invariably fatal.†

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\* A fatal termination to the illness, with which that distinguished surgeon and exemplary man had long been afflicted, had taken place a few days before the evening, upon which this paper was read to the Obstetrical Society.

† Some post mortem examinations of cases of trismus are given in the 15th volume of the *Edin. Med. & Surg. Jour.* by Dr. Labatt, but in it he confines his observations to the state of the navel, to controvert Mr. Colles's opinion above alluded to. It appears to me, that it is from not attending to the distinctive characters I have pointed out, some authors have been led into the belief of the curability of trismus. But it will be found, that in the disease which is remediable, the mouth, instead of presenting the peculiar features of a firmly closed jaw, and angles of lips drawn directly backwards, is either widely opened, or drawn to one side, or if clenched by spasm, can with very little force be opened, as in the case of a child seven days old, recorded by Abercrombie, in which, after death, a long and very firm coagulum of blood was discovered, effused between the bones and the membranes of the cord on the posterior part, and extending the whole length of the cervical portion of the spinal canal (*On Diseases of the Brain and Spinal Cord.* Edin. 1834. 3rd edit. p. 358). And I am fully borne out in my statement, that Trismus Infantum has hitherto resisted every mode of treatment, by Dr. Collins, in the *Dub. Jour. of Med. Sc.* vol. ix. page 83. The result has attended various modes of treatment adopted by Finckh. See his interesting Memoir published in

I have now gone through what may be termed primary convulsions, or those directly dependant upon an unnatural condition of the great vital organs, the brain and medulla spinalis, the lungs, and the heart ; and I shall now offer a few illustrations of disorders of the nervous system, which may be called secondary, or sympathetic, still confining my observations to infants shortly after birth. It is a well-known fact, that the irritation caused by offending matter in the intestines, whether from retention of the meconium, or the use of aliments which disagree (amongst which the most common is thick victuals), is a very fertile source of such affections. From analysing cases of this description, it would appear, that gastro-intestinal derangement may not only produce spasmodic movements, co-existing with evidence of cerebro-spinal congestion ; but it may also affect the distribution of nervous influence—of course by a reflex action—but without any disordered condition of the nervous centres capable of demonstration. Examples of these different states I shall now give. The following were two cases of threatening apoplexy from this cause :

CASE XXII.—May 26, 1838. Penrose's child, now three days old, was griped throughout yesterday ; this morning it has a tendency to fits, and presents a paralytic condition of the right side of the face. It was given blue pill, followed by oil and turpentine, and as the tendency to convulsions still continued, a leech was applied to the fontanelle, and it was immersed in a warm bath. Next morning it was quite well.

CASE XXIII.—A child, the name of whose parent I neglected to note, born in ward 7, bed 70, on the 27th April, 1838, and brought up by the spoon, was observed on the tenth day, its bowels having become deranged, to lie in a soporose condition, with tremulous motions of the lower jaw, the left angle of the mouth being drawn downwards. A leech was applied to its

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Hecker's *Annalen*, vol. iii. No. 3, in which he gives the post mortem appearances in twenty cases. Darwin entertained the curious idea, that Trismus with the mouth open is most usual in newly born infants ; but the opposite is the case in those who have already begun to masticate hard substances (*Zoonomia*, vol. v. p. 50).

head, the bath used, and calomel given, followed by oil. Next day it was more lively, but feeble, and in pain ; some aromatic spirits of ammonia, in carraway water, was given at intervals, and an injection of a grain of carbonate of ammonia, and two drops tincture of opium, in a little camphor mixture, thrown up. On the following morning it was much better. It had lost the drowsiness and tendency to spasm in the muscles of the face.

Dr. Parrish, one of the physicians to the Pennsylvania Hospital of Philadelphia, has drawn attention to the fact, that infantile convulsions often arise from spasm of the intestines. In one case, five months' old, he found after death more than half of the small intestines irregularly contracted. In some places, for more than an inch in extent, the bowel was reduced to the size of a goose-quill ; in others, it appeared as if tied with a thread, its calibre being almost obliterated. The omentum was closely folded up in the form of a small cord, and lay on the arch of the colon.\* In the following case, convulsions were produced by an inability to discharge the contents of the abdomen, in consequence of one of the bowels not being developed beyond a rudimentary condition.

CASE XXIV.—July 11, 1838. Tench's child, born on the 7th, has had no discharge of meconium since birth, notwithstanding the use of purgatives and injections. A little jelly-like fluid alone was expelled, and even that has ceased since yesterday. It is now jaundiced, cold, feeble, with a tendency to fits, still capable of swallowing ; but what it swallows it throws up. No treatment was effectual in moving the bowels, and it died convulsed, the following morning at one o'clock.

*Post Mortem made next Day.*—Body emaciated, and generally of a yellow colour. On opening the abdomen, the liver appeared healthy, the ducts pervious, and the gall-bladder full of green bile ; the stomach and duodenum were distended with air, and contained a yellowish, thick, creamy fluid ; in the ileum, were several masses of green, rather hard and dry faecal matter, at irregular distances from one another, but the mucous mem-

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\* North American Medical and Surgical Journal for January, 1827.



brane in contact with them, was not inflamed ; the arch of the colon was very defective in size, being little more than a narrow flat band ; the descending colon and rectum natural.

The two following cases exemplify the rapidity with which convulsions, the result of intestinal irritation, may produce death. In the second, not only the brain, but the spinal marrow appears to have been engaged.

CASE XXV.—Rafter's child, born on the 31st May, 1839, was spoon-fed, in consequence of its mother becoming affected with peritonitis. It seemed thriving up to the 8th June, when, its bowels becoming disordered, it was seized with fits, for the relief of which, turpentine enemata, the warm bath, and wine whey were directed. Next morning it appeared in a state of collapse ; it was pulseless, cold, and blue ; breathing by gasps, occurring at long intervals, but not affected with spasms. The warm bath was again resorted to, and a stimulating liniment rubbed to the spine, and wine whey, with other remedies calculated to bring about reaction ; however, it never rallied, but died the day following.

CASE XXVI.—M'Donald's child, born on the 20th February, 1839, was cross on the 24th, its stools being unnatural ; an enema was given, and at bedtime, a quarter of a grain of Dover's powder. About an hour after she fell asleep, and in a short time was seized with a convulsive fit. The heart beat feebly, and sometimes intermitted ; breathing at times almost suspended ; body cold ; pupils contracted ; now and then the child clenched its hands, drew up its arms, and threw its body backwards. A stimulating liniment was assiduously rubbed over the heart ; the body was immersed in a warm bath, while cold water was thrown on the head ; wine whey was freely administered. By these means the infant was restored, and was left breathing freely, and crying loudly. Two grains of carbonate of ammonia were ordered every half hour. At ten o'clock visit next day, it appeared very weakly, and lay with little signs of life, save slight motion of the *alæ nasi*, and a feeble beating of the heart, at the rate of eighty-four in the minute.

The former means were again resorted to, and at twelve o'clock it appeared much more itself, breathing freely, and having its eyes open. The same remedies were continued throughout the day, together with a leech to the head, and a mustard cataplasm to the spine, notwithstanding which it died about two o'clock. The body was removed without examination.

To enter fully into the treatment required by cases such as these, would extend this paper to an inordinate length. I shall therefore rest satisfied with the general statement, that the convulsions will demand almost the same measures as before alluded to, graduated of course according to the previous condition of the little patient; and that besides medicines, which tend to correct the unnatural condition of the alvine discharges, we should be particular in supplying the infant with wholesome diet. If the child be spoon-fed, a healthy nurse should be immediately obtained; and if brought up on the breast, the milk of another woman should be tried; nor should we be content with one alteration, but again and again should the nurse be changed, until milk is found, which will agree with the infant. With respect to the use of opium in infantile convulsions, I would observe, that although, while congestion prevails, it must not be employed; after that state is removed, it becomes a remedy of great utility, as it allays the irritability, and breaks through the habit, upon which the continuance of convulsions frequently depends.\*

The attention of the profession has been but lately called to the fact, that paralytic affections in children may exist, uncombined with any indication of cerebro-spinal disease. Underwood was aware that serious disease of the brain was not always present, and Marshall Hall has given a few observations on paralysis depending on dentition: but it is in the papers of my

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\* Upon this subject North's work on Convulsions may be advantageously consulted. He dwells particularly on the injurious effects of indiscriminately resorting to the abstraction of blood in such affections.

friends, Dr. Henry Kennedy of this city, and Dr. Charles West of London, that the most elaborate consideration of this subject is contained. To their communications I must refer,\* and content myself with merely noticing two cases of this nature which I have met with.

CASE XXVII.—In the case of a lady, whom I attended on the 21st Oct. 1841, of her fifth child, a girl, the labour was rendered somewhat tedious, in the first stage, by a slow dilatation of the os uteri, but the second stage was completed rapidly, and the child was born naturally. It cried loudly, and showed every symptom of being vigorous, nor was any complaint made respecting it till the third week, when it was pointed out to me that the left arm was completely paralysed. In all other respects the child was in perfect health, if we except the existence of greenish evacuations, attended by abdominal pain, but not of greater amount than we so commonly see in infants. What prognosis to give in this case puzzled me very much, for I could not satisfactorily ascertain from the attendants, whether it ever had had the power of moving that limb; and I feared it might be an instance of congenital paralysis, owing perhaps to deficiency in the nervous endowment. However, as that arm was as warm, and fully as well formed, as the other, and as sensation remained, I held out expectations of amendment, and immediately set about correcting the only deranged function I could detect. Mercurial alteratives, and antacid purgatives, with the warm salt water bath, constituted the first remedies I employed. I then directed the douche to the affected limb, and the frequent use of stimulating liniments; and when the intestinal secretions were rendered more natural, I followed up the advantage gained, by the exhibition of chalybeate tonics. Under this regimen I had the satisfaction to observe the paralysis dis-

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\* H. Kennedy on Paralytic Affections in Children. Dub. Med. Press, vol. vi. p. 201. West on some forms of Paralysis incidental to Infancy and Childhood. Lond. Med. Gazette, Sept. 8, 1843, p. 829. See also Colmer on Paralysis in teething Children. Lond. Med. Gaz. Ap. 21, 1843.



appear, and the child has now as perfect power over that limb as over the opposite. Purgatives, followed by tonics, must then, I think, be the line of practice we should adopt in such cases, combined with free scarification of the gums, when at a later period than that, to which I have confined myself in these observations, teething is, as it appears not unfrequently to be, the cause of this paralysis. The affection, indeed, appears to me very much to resemble neuralgia, arising from a similar source in the adult, only that a different series of nerves is engaged;\* and as in the one, so in the other, the tonico-purgative treatment appears the most beneficial. Amongst the tonics to be employed in either case, iron is to be preferred, and of all preparations I think the solution of the citrate, as manufactured by Mr. Bewley of this city, most deserving of a trial. Its taste is so little disagreeable, that any child will take it, and it is eminently efficacious. The following case was most probably an instance of the same affection:

CASE XXVIII.—Lawlor, whose child I have already ad-  
duced as an example of transient apoplexy, resulting from pressure on a prolapsed funis, and which left hospital on the usual day in a perfectly healthy condition, as far as was ascertained, returned with it a year afterwards, stating that it had never been able since birth to hold up its head. It had, when brought back, the power of rotating the head when supported; but when placed in the erect posture, it was unable to prevent it falling backwards, nor could it well restrain its motions forwards. In other respects it was in perfect health, nor had it ever had convulsions since it left hospital. Now, I think I am justified in assuming, that this was a case of paralysis, arising from the cause I have mentioned, and appearing very shortly after the

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\* They both illustrate the now recognized law, so well enunciated by Doctor Graves, that "impressions made upon any portion of the nervous extremities may be propagated towards their centres, and thence by a reflex action transmitted to the nerves of other and more distant parts, so as to give rise to morbid phenomena, analogous to those, which are produced by disease, originating in the central parts themselves."—*Clinical Medicine*, Dub. 1843, p. 406.

child was discharged; and not either the remains of the temporary congestion of the brain at birth, or resulting from congenital deficiency: for although the mother asserted, it had *never* had power over its head, it is not to be supposed, that the experienced nurse of the ward, under whose care it was, could have handled and dressed it for eight or nine days without detecting this, or even a slighter deficiency. It should show, I think, that such cases, if neglected, may become chronic, and probably at length irremediable. The mother would not remain to allow the effects of treatment to be observed. I may remark, I have lately seen two cases of a more advanced age, in whom limping apparently arose from a disordered state of the bowels; in one of them it was combined with incontinence of urine. But to enter into their consideration would be overstepping the bounds which I have laid down for myself on this occasion.\*

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\* This disease differs materially from the paralysis, which follows remittent fever in children, of which a curious example was admitted into the Lying-in Hospital on the 21st April, 1839. She was then twenty years of age, and the account she gave of herself was, that when ten years old she had had fever, succeeded by complete loss of power over her lower limbs. Twelve months after, when she was quite hemiplegic, she said she was brought to St. John's Well (a holy well, formerly in great repute for miraculous cures, near Dublin), and bathed in it; the consequence of which was, that although she could not even stand when she went there, she immediately acquired sufficient power to walk about the adjoining field. However I fear the poor girl's anticipations were not fulfilled to the extent she expected, for when in hospital she presented the following deformity. She had power over the left thigh, but not over the right one; the former therefore was well developed, the latter shrunken and flaccid. The right foot she could bend on the ankle, the left she could not; the right leg was muscular, the left wasted and small. The left foot was very much arched; the right flat, the big toe of the latter being turned over the dorsum of the first and second ones. When she walked it was principally on her inner ankles. She was able to raise the toes of the right foot sufficiently to prevent their touching the ground; but to avoid tripping with the other, she was obliged to elevate the knee considerably. The latter foot she turned very much outwards. The paralysis, considerable as it was, did not extend to the generative organs, for she became pregnant, and was delivered on the day mentioned, after a labour of ordinary duration.

The subject would scarcely be complete if I did not allude to the fact, that infants in many instances appear to be predisposed to convulsions, by the state of the mother during gestation and labour. However we may find a difficulty in demonstrating a vascular and nervous communication between the parent and the offspring she carries; proofs are not wanting of mental impressions and contaminations of the blood being transmissible from the former to the latter individual. At all times, in the female, the circulation in the abdomen and uterine system manifests a great liability to be deranged by shocks, acting on the nervous system; and thus it is probably, that a fright to the mother, while pregnant, may be the means of producing nervous disturbance in the child, after their connexion has been severed. Thus Gölis relates, that in 1809 most of the children, born after the bombardment of Vienna, were seized with convulsions twenty or thirty days after birth, and died. Mr. Reid had under his care in St. Giles' workhouse a woman affected with chorea, of which the mother gave the following history:—She said, that having borne children, she was in the fourth month of another pregnancy, when there was thrown upon her bosom a frightfully disgusting object. She was for two months in a state of extreme nervous illness from this cause; but she recovered, and went her full time. She remarked, however, that the child was extraordinarily lively in the womb, so that at times she was overcome by the sensations she experienced. The child at the instant of its birth displayed the writhing motions of chorea; they had continued up to that time, when she had arrived at thirty years of age. Her head was then remarkably small and narrow; she was thin and worn, and the mind very little removed from complete idiocy.\* Convulsions also frequently ensue in the children of those, who have themselves had convulsions during gestation or labour, if they chance to survive their birth. Diseases of the parent, too, by which the foetus can be contaminated, may be a source of infantile convulsions, by depressing the powers of life; it is in this way many

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\* London Medical Gazette, vol. xvi. p. 287.



cases which present a syphilitic taint arrive at a fatal termination. In the same way, medicines administered during pregnancy may, as is well known, affect the foetus in utero ; and it is strange, that it is not always those, which require to be given to infants with great caution. Thus children bear mercurial preparations well, and they may be long continued, even at an early age, with impunity ; but if exhibited to the parent, so as to exert their specific action during the latter months of pregnancy, are very liable to destroy intra-uterine life, or, as I am led to think from a case, in which mercury became necessary to arrest peritonitis before delivery, they predispose to convulsions, if the offspring be born alive. On the other hand, opium, which so easily affects infants, may be given during gestation with the utmost safety. I have heard Dr. Collins state that he had a patient, to whom he gave a grain of opium three times each day, for three months antecedent to labour, and yet the child did not suffer.

It only remains for me to mention, that spasmodic affections, or paralysis of certain muscles, merely local in their nature, may result from injury done to a nerve during labour, either by pressure against a resisting point in the pelvis,—as is particularly liable to occur in face presentations, in which, however, the distortion must not be confounded with that arising from tumefaction,—or by the application of the forceps to the head, or the blunt hook to the groin. Examples of paralysis of the seventh pair of nerves, consequent on the use of the forceps, are given by Kilian, Dubois, Evory Kennedy, and Landouzy, and in explanation of this occurrence, an observation made by the last named author deserves to be quoted. In the adult, he remarks, the projection of the mastoid process, of the external meatus of the ear, and of the sterno-mastoid muscle, renders compression of the seventh pair, at its exit from the cranium, almost impossible ; but in the infant at birth the reverse condition of these parts easily admits of injury in that situation.\* Of this affection

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■ Gazette Médicale de Paris, Aug. 10, 1839.

I have myself only two cases to bring forward. One was that of Doyle, delivered with the forceps on the 4th May, 1838, after a labour of twenty hours; the foetal head was very large, and the temple was indented by the instrument. The angle of the mouth was drawn down, and to one side; there was ptosis of that eye, and when the child cried the whole face became distorted. Shortly after, evidences of cerebral congestion, probably the result of the long labour, appeared, and required leeching for their removal. In the other, that of Elkington, delivered with the same instrument on the 23rd October, 1839, after twenty hours' labour, there was a wound behind the left ear at birth, with paralysis of the side of the face. In both the muscles were daily regaining their power, when, probably in consequence of the same cause as determined the existence of puerperal peritonitis, then prevailing, phlegmonoid erysipelas of the scalp occurred, and they died.

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ART. III.—*Examination of the Question—Is the Chyle incipient Blood?* By JOHN ALDRIDGE, M. D., Lecturer on Chemistry at the Park-street School of Medicine, Dublin.

IN the progress of modern organic chemistry it has been rendered extremely probable, that the essential constituents of the blood of animals, the albumen, and fibrine, are taken into the stomach, ready formed, and that digestion consists simply in their solution; and that when this process is effected, and they are absorbed, they at once constitute blood, fit for the purposes of nutrition, and not requiring to undergo any further change.

If this doctrine should ultimately prove true, it will introduce an extreme simplicity into a department of physiology that has been hitherto full of obscurity and complexity. The arguments in its favour, as stated in M. Liebig's late work on Animal Chemistry, are very powerful; and it therefore deserves the most careful consideration, not only on the part of those who are interested in the perfection of chemical science, but of all

who seek to understand the intimate phenomena of organic functions.

But this doctrine is opposed to all our preconceived notions : we have been hitherto taught in the schools that blood is gradually formed ; that there are a succession of steps in its production ; that the process of hæmatogenesis is a very complicated one ; that after digestion (in itself a series of stages, chymification, and chylification), and subsequently lacteal absorption, the chyle has to undergo *assimilation* ; and the coats of the vessels, the conglobate glands, the lungs, liver, &c., are all organs accessory to the completion of the blood-making act. Now the consideration of this new chemical doctrine, of the blood being taken into the system ready formed, involves a complete revision of all these cherished theories. It is necessary that physiologists and chemists shall re-examine the data upon which the former hypotheses were founded, in order that they may rest assured, whether or not the deductions they had heretofore received were legitimately drawn. This reason has led me to investigate the facts that have been hitherto discovered with respect to the chyle, and to see whether those facts justify the conclusion which has been almost unanimously arrived at by physiologists, namely, that chyle is blood in an incipient stage of its formation : and I think it may be useful to the Profession to recall these facts to the recollection of its members, so that they may be able to judge whether they are warranted in continuing to entertain this opinion.

The common theory, as regards chyle, is, that it is the nutritious part of the food, in a stage of assimilation. This theory is supported by the following facts : it is found in streaks through the ingesta within the intestines ; the lacteals after digestion are found distended with it ; diseases of the mesenteric glands are accompanied with marasmus ; ligature of the thoracic duct is generally followed by death ; the coagulability of chyle increases in its progress through the vessels ; the chyle of the large lacteals contains more coagulable matter than the lymph of the lymphatics ; the contents of the thoracic ducts have some-



times a reddish tint; the iron in the chyle is present in a different state from what it is in the blood, being easily detectible after the addition of nitric acid. These appear to me to be all the arguments that have been brought forward to prove that chyle is incipient blood. I have not thought it necessary to mention the names of the discoverers of these facts; they are now the property of science; and the authorities upon which they rest can be easily ascertained by referring to any of the standard works on physiology, especially Müller's admirable compilation.

Before examining of what value these facts are in the support of the prevailing theory, let us see what are the relations of the contents of the lacteals, lymphatics, and blood-vessels, when the intestines are empty, and when the liquid in the first class of these vessels is uninfluenced by the process of digestion.

The lymph has been examined by Reus and Emmert, Lasaigne, Müller, and Nasse, &c.: it appears in all its properties when drawn from any of the large lymphatics, to be identical with the "*liquor sanguinis*," except in the proportion of its constituents, being much more dilute: thus when allowed to stand in a glass vessel, a coagulum of fibrine separates from it; and the remaining serum contains albumen, together with the ordinary salts of the blood. Sœmerring, who found it in lymphatic varices, says that this lymph did not coagulate; Müller throws doubt upon this latter observation, as he regards coagulability as an essential character of lymph; and yet he tells us that when frogs are kept several days out of the water in summer, their lymph loses its coagulability. Müller and Nasse have discovered scanty globules in the lymph of man and other animals, smaller than the blood globules, granulated upon their surfaces, and containing one or more nuclei, the latter being rendered more apparent by acetic acid.

The blood consists of *liquor sanguinis*, with innumerable red globules in suspension. In reference to the relations of lymph and blood, Müller says, "the lymph must, in its composition, be

exactly identical with the fluid portion of the blood, or *liquor sanguinis*, and the blood itself must consist merely of lymph and red particles." The blood contains a few of the lymph globules, besides its proper globules.

The lacteals in the intervals of digestion contain a fluid possessing all the ordinary properties of lymph. Tiedemann and Gmelin found that in a fasting horse the liquid of the thoracic duct contained somewhat more albumen than the lymph, and was of a reddish colour,—redder than it was ascertained to be after a meal; from whence they very rightly deduce, that this tint could not proceed from a process of assimilation, but rather from the presence of some of the colouring matter of the blood, which they proved by the reaction of sulphuretted hydrogen. In fact, these observers have proved that the red colour of the chyle when present (which is rare) is most marked in fasting animals, and least so the more nutritious the food. They, moreover, found that the contents of the thoracic duct coagulated more firmly in fasting animals; and that the liquid contained in the large lacteals contains more fibrine than the lymph of the large lymphatics of the pelvis. They consider that this fibrine is yielded by the conglobate glands; and therefore they conclude that the mesenteric glands afford more fibrine than the glands of the lymphatic system. Müller prefers considering the fibrine to proceed from a transformation of albumen effected by the walls of the vessels: he maintains that the vessels have a power of changing the constitution of their contents; and quotes the experiments of Emmert, who found that the application of *Augustura virosa* (bark of *Strychnos nux vomica*), or prussic acid, to a wound in the inferior extremities, did not poison when the abdominal aorta had been previously tied: from hence Webber had deduced, that the lymphatics have a power of decomposing or altering the substances they absorb. But surely this deduction is not warranted; for it remains to be proved that the lymphatics are capable of absorbing these poisons. Experiments appear to lead to the conclusion that the lymphatics and lacteals reject certain matters, and refuse to absorb them.

And even if the poisons are capable of being absorbed by the lymphatics, it remains to be ascertained the rate at which the absorption is effected, and the rapidity with which lymphatic circulation is carried on. These circumstances would necessarily very much influence the effects produced. The rate at which the lymph and chyle travels has not been accurately ascertained, but compared with the blood, it is evidently very slow. Lymph and chyle are both alkaline, but less so than blood.

Müller says: "The lymph of the intestines, when it contains matter just absorbed from the digested food, is always more or less turbid, and has a yellowish gray, or whitish colour, arising from the presence of a great number of globules; it is then called chyle." The chyle globules are for the most part very small ( $\frac{1}{7199}$  of an inch in diameter,—Prevost and Dumas), but according to Müller and Wagner there are some the size of the blood corpuscles, or even larger, opaque; and to these they attribute the turbidity of the chyle during digestion. These larger globules cannot be lymph globules, for the latter are much smaller than the red particles of the blood; nor are they blood globules, for they are white, and different in form; nor are they the nuclei of blood globules, for they are as large, or larger, than the red particles themselves. The smaller globules are admitted by all observers to be nothing but drops of oil, and can be extracted from the chyle by ether. The globules, whether larger or small, are evidently derived from the food, for they are only present in the chyle when the aliment has been just digested. Both kinds of globules are found in the very minutest lacteals.

The chyle, after digestion, is not milky in birds; it is not very turbid in herbivorous mammalia; it is not milky in carnivorous mammalia, when fed on liquid albumen, fibrine, gelatine, cheese, starch, or gluten; many of these substances being highly nutritious. Majendie, Marcet, Tiedemann, and Gmelin all agree that the turbidity of chyle is in proportion to the fatty nature of the food. "In general," says Berzelius, "the fat is



the sole substance which is found more abundantly in chyle during digestion, than in the state of intestinal emptiness." From these facts it is evident that the chyle globules, whether large or small, opaque or transparent, are nothing but fat derived from the food.

The chyle in the first lacteals, previously to passing through the ganglions, is not coagulable; whilst a clot separates from that taken from the larger trunks. This clot is more considerable than what is obtained from the lymph of the larger lymphatics; but this is in part explained by Müller, by the involvement of globules in the coagulum. Whether this fibrine be derived from the glands, or from the conversion of albumen, according to the hypothesis suggested by Tiedemann and Gmelin on the one side, and Müller on the other, and which I have already alluded to, when speaking of the chyle in the intervals of digestion, it is evident that this increase of coagulability is no argument for a transition of chyle into blood; for if so, it would only occur in the chyle of digestion. We have seen that in a fasting animal there is more albumen in the chyle than in the lymph; during digestion there is, on the contrary, less.

The fluid contained in the lacteals is not, as we have seen, invariably milky during digestion. Tiedemann and Gmelin ascertained that, first, after the use of butter the chyle became superabundantly charged with fat; and second, that after starch, they found sugar in the chyle of a dog.

Let us now turn our attention to the source of this milky fluid, to which the name of chyle is given. "The fat," says Berzelius, "which is a part of the aliment, swims in the stomach in a melted state on the surface of the chyme, but after mixture with the bile and pancreatic liquid, becomes converted into a fluid, having the appearance of an emulsion, which becomes disseminated in milky striæ through the chyme. This milky fluid is afterwards absorbed by the lymphatics, through the parietes of which its white colour can be perceived, and these vessels are from this circumstance called *lacteals*."

Sir B. Brodie ascertained that when the ductus cholodochus

was tied, the contents of the lacteals were no longer milky; from whence he concluded that bile was necessary to the formation of chyle. Berzelius remarks, that the reason of this it is now easy to see; the alkaline bile being absent, the fat of the aliments could no longer assume the form of an emulsion.

Here then are the results: *that during digestion some fat or sugar, as the case may be, is added to the lymph contained in the lymphatics of the mesentery; neither fat nor sugar contain the elements out of which blood can be formed; and chyle cannot therefore be incipient blood.*

No doubt that the iron contained in the chyle serves in part for the formation of the blood globules; no doubt the fat contained in the chyle undergoes numerous changes afterwards in the circulation; but the albumen and fibrine, the essential elements of nutrition, emphatically the blood, are not formed out of any thing contained in the chyle.

Dr. Graves has well shown that the lymphatics may be considered the veins of the white tissues: it is not wonderful that the mesentery should be freely furnished with them: the absorbing power of the lymphatics, as well as that of the veins, has been demonstrated by many observers: we can therefore understand that many of the more fluid results of digestion may easily find their way into these vessels, without considering them the only channels through which the blood can receive its new supplies. So contrary is the fact, even as regards the milky emulsion called chyle, that Tiedemann, Gmelin, and Mayer have found it in streaks in the blood of the intestinal and portal veins. And that true aliment may be absorbed by the capillaries, is proved by the serum of the blood of sucking kittens and puppies being frequently found milky, by Schlemm, Rudolphi, Müller, Mayer, &c.

I will not spin out this article by dwelling on the possibility of the marasmus which accompanies mesenteric disease, being the cause of the latter, or what is more likely, an effect of a cause common to both; nor by pointing out the fallacies attending such operations as ligature of the thoracic duct, an operation

after which, by the way, the animals did not always die ; nor, by appealing to the want of likelihood, that a liquid so scanty in its quantity, and so slow in its motions as the chyle, should be the sole source from whence nutrition and secretion derive their supplies. I am satisfied with pointing out the insufficiency of the proofs hitherto depended on, in support of the opinion that chyle is incipient blood.

There is nothing new in the facts brought forward in this paper : all that can be considered as original is the point of view under which the subject is presented. I have not omitted any that appeared to be opposed to the conclusions to which I have been led ; nor have I distorted any to suit my arguments. In conclusion, it is to be remembered that all the foregoing data have been established by the supporters of the prevailing doctrine.

ART. IV.—*Remarks on Doctor Aldridge's Communication on Urinary Diseases.* By GOLDING BIRD, A. M., M. D., Assistant Physician to, and Lecturer on Materia Medica at Guy's Hospital.

TO THE EDITOR OF THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

SIR,—The perusal of Dr. Aldridge's paper in the last number of your excellent Journal, has induced me to offer a few brief remarks, for the insertion of which I must rely on your own sense of justice.

Dr. Aldridge describes (p. 460) a case in which he discovered a deposit in the urine, consisting of square plates, with a circular hole in the centre of each ; these he very correctly supposed to consist of oxalate of lime. After indulging in certain speculations regarding the origin of this deposit, and the connexion between the oxalate and carbonate of lime, he concludes by remarking, that the "question is one of mere curiosity." The detection of the oxalate is announced in the light of a discovery, and no reference is made to the labours or observations of



others, except to M. Rayer, who figured the microscopic appearance of the oxalate artificially precipitated by oxalic acid from urine; and to M. Donné, who has described the presence of crystals of the oxalate in urine after the ingestion of sorrel.

In Guy's Hospital Reports, No. XIV. p. 211, published in April, 1842, I announced the frequent presence of crystals of oxalate of lime in the urine, and gave drawings of their microscopic appearances, including the curious optical illusion presented by the flattened rhombic octohedra of the oxalate seen when examined in a dry state. They then resemble black tables perforated by a square aperture (not a circular one, as stated by Dr. Aldridge), with sharply defined angles. In the London Medical Gazette (July, August, 1842) I published a series of cases characterized by the abundant presence of oxalate of lime in the urine. The existence of this salt is there shown to be connected with severe irritative dyspepsia, and often with a highly irritable condition of the genito-urinary organs. In my lectures delivered at Guy's Hospital in January, 1843, I again drew attention to this very important subject; and in the Reports of them, published in the Medical Gazette, engravings were given of the microscopic appearances presented by the different varieties of the oxalate.

A further account of my observations has appeared in Mr. Braithwaite's valuable retrospect, and in Dr. Hoskin's translation of Professor Scharling's work on Vesical Calculi; the microscopic figures have moreover been copied in the last edition of Dr. Prout's elaborate work. So that I think Dr. Aldridge can hardly plead ignorance of the literature of the subject as an excuse for tacitly claiming the discovery of the oxalate in urine.

I trust, Sir, I shall not be deemed guilty of egotism in thus venturing to claim the credit of the discovery of oxalate of lime in urine in a crystalline form, as the investigation of this very serious pathological state of the urine cost me months of labour in a large field of experience.

In another part of Dr. Aldridge's paper (p. 466) some very

interesting remarks on diabetes occur, in the course of which much importance is deservedly attached to the remarkable relation borne by the composition of sugar with ammonia to albumen, and a formula is given illustrative of these views. Now, Sir, without wishing to charge Dr. Aldridge with direct plagiarism, I would wish to direct the attention of your readers to the fact of this relation having been pointed out, and adduced in favour of the treatment of diabetes by ammonia, nearly four years ago, by my friend and colleague, Dr. Barlow, in *Guy's Hospital Reports*. In January, 1844, Dr. Aldridge, after a formula, showing the relation of sugar and ammonia to proteine (the base of albumen), remarks: "Now, if the essential constituent of albumen is capable of being formed out of sugar and ammonia, with loss of water and oxygen, there is no reason why sugar and ammonia should not be capable of being generated out of albumen, by combination with oxygen and the elements of water."\*

In October, 1840, Dr. Barlow published a formula, which differs only from Dr. Aldridge's in the relation between sugar with ammonia to albumen, being shown by their per centage composition, instead of an empirical formula: adding, "Thus we find that when the numbers which represent the atomic composition of ammonia and sugar are added in certain proportions, we obtain a result which exactly coincides with the numbers representing the atomic constitution of albumen, increased by certain equivalents of carbonic acid and water, substances which are continually excreted from the body."†

Whatever merit may attach to these views,—which have at least in many cases led to a satisfactory treatment of a most formidable disease,—must be conceded to Dr. Barlow.

At page 468, Dr. Aldridge gives a useful practical hint for the detection of albumen in the urine by nitric acid; he states,

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\* Dublin Medical Journal, January, 1844, p. 466.

† Guy's Hospital Reports, 1840, p. 287.

“Nitrate of albumen is soluble in excess of urine; if nitric acid be added in small quantities to albuminous urine, the precipitate at first formed is capable of being re-dissolved by agitation. This proves that nitric acid is a bad means of detecting small quantities of albumen in the urine.”\*

This “practical hint” has been particularly pointed out by my friend Dr. John Griffith in the London Medical Gazette in 1842: “When a few drops of nitric acid (sp. gr. 1.5) are added to urine containing a small quantity of albumen, a cloud is immediately formed, which by agitation is immediately redissolved.” “Therefore the formation of a cloud by heat soluble in a drop or two of nitric acid is no proof that albumen is absent, &c.”†

The only novelty in the last quotation from Dr. Aldridge’s paper is the use of the term nitrate of albumen, which I do not think will receive the sanction of chemical authorities.

There are several other parts of Dr. Aldridge’s paper equally destitute of originality, to which it is unnecessary to refer, as it is quite possible that physicians engaged in similar pursuits may arrive at the same conclusions by different paths, and independently of each other. Those which I have ventured to point out, your talented correspondent must be too well read in the literature of medical science to be quite unacquainted with.

In conclusion, I regard Dr. Aldridge with respect, as a fellow-labourer in the difficult field of chemical pathology, and feel sure that his character will not stand less high, nor his reputation suffer, by practically remembering the motto, “*summum cuique.*”

I remain, Sir, your obedient Servant,  
GOLDING BIRD.

Myddleton Square, London,  
January 4, 1844.

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\* Dublin Medical Journal, 1844, p. 468.

† London Medical Gazette, 1842, p. 112.



ART. V.—*Observations upon the Causes, and the Operations recommended for the Cure of Entropium and Trichiasis.*

By W. R. WILDE, M.R.I.A., Lecturer upon the Diseases of the Eye and Ear in the School of Medicine, Park-street, and Member of the learned Societies of Paris, Vienna, Berlin, and Athens.

SIR PHILIP CRAMPTON, in his most admirable Essay upon the Inversion of the Eyelids, has with great justness observed, that “the Entropeon is wonderfully common among the lower orders of the Irish;” and this opinion will, I am sure, receive confirmation from all those practitioners of this country, who may happen to be much occupied with the diseases of the poor, particularly in large cities. Some idea may be formed of the prevalence of this affection, when I state, that of 1056 cases of diseases of the Eyes, of which 748 were original applications, treated at the Frederick-lane Dispensary during the year ending September, 1843, no less than 27 were instances of inversion or irregularity of the cilia, requiring operation.

The symptoms and history of this disease (under which I include the inversion, irregularity, and morbid growth of the eye-lashes) have been so well described in all the modern works upon ophthalmic surgery, that it is unnecessary to enumerate them in this short statement, the chief design of which is to throw, if possible, some light upon the causes of the inversion—to remark upon the applicability of the different methods of cure to the several varieties of this disease—and to exhibit the ill effects of certain operations upon the subsequent condition of the eye and lachrymal appendages.

Those who have observed these morbid states of the cilia and the margins of the eyelids, will recognize the following varieties:—Entropium, the *inversio palpebrarum* of the ancients, which may be divided, according to its locality, into superior or inferior; or into its extent, as when it occupies, which it frequently does, both lids together, when it may be termed com-

plete ; and when it takes place on a portion of the lid only, partial. Neither of these terms, however, of partial or complete, refer to the progress or duration of the disease, but to the moiety of the lid or lids affected by it. In all these, the *setting* (to use an artistic expression) of the eyelashes remains unaltered, while the tarsal margin is so viciously bent inwards towards the globe of the eye, that the hairs lie upon, or are in contact with the conjunctiva corneæ et scleroticæ ; nay, in some cases, as when the disease affects the lower lid, the cilia absolutely lie between the globe and the palpebra. When the disease occurs in the upper eyelid, the inversion is almost invariably increased by turning the eye upwards. The effect of such an unnatural position of these parts will be manifest ; and will present the symptoms of irritation, pain, nictitation, the sensation of a foreign body in the eye, incessant winking, epiphora, chronic inflammation of the conjunctiva, a granular state of the lids, vascularity of the cornea, photophobia, spasmodic action of the orbicularis palpebrarum and corrugator supercilii muscles : the head being inclined downward and generally on one side, and the shoulders elevated ; to these succeed redness of the tarsal margin, and oftentimes œdematous swelling of the eyelids, followed by opacity of the cornea, which, having gone through the various stages of pannus, has been not inaptly likened, by the graphic Saunders, to the appearance of a macerated ligament ; and finally, total loss of vision ensues—the pain, irritation, and intolerance of light decreasing as the transparent cornea becomes white and thickened and the conjunctiva insensible, perhaps cuticular.

This is generally the result of the extreme inversion of the ciliary margin of the upper lid. In cases, however, where the lower lid is alone affected, and this form of the disease occurs most frequently among females advanced in life, the symptoms seldom amount to the degree of severity I have just detailed, and the lashes, which are usually finer and shorter on the lower than the upper lid, have a slight inclination towards the external canthus, as well as inwards, and lie along the

junction of the cornea and lid, while the external integument is almost invariably lax, smooth, and shining.

Another form of this disease is where a portion only of the tarsal margin, with a normal row of cilia, becomes inverted; the most marked cases of this description generally occur in the outer half of the margin of the upper lid. In an instance of this description which lately came under my notice, in a young lady from Edinburgh, one-half of the superior palpebra, with its cilia, was completely turned inwards, without the slightest alteration in any other part of the palpebral opening; the irritation of the cornea was in part got rid of by an effort of nature, marked convergent strabismus of that eye having taken place since the supervention of the entropium. In another well marked case of partial inversion of the lid, without trichiasis or distichiasis, it occurred congenitally. The child, which was placed under my care by Dr. R. L. Nixon, was remarked a few days after birth to have sore eyes, and was said to be constantly crying and excessively irritable. I saw it when one month old, and then the margin of the outer half of the right superior lid was completely inverted; and young as the child was, it scarcely ever, when awake, removed the back of the hand from the affected eye, which was kept spasmodically closed, and had all the appearance of strumous ophthalmia. Entropium has been divided by authors into traumatic, and acute and chronic; with these, however, we do not at present particularly deal.

At times, without any inversion of the lid, some of the cilia themselves will turn inwards in an unnatural manner, and cause, in a modified and less degree, the symptoms attending entropium; these irregular growths, or to speak more strictly, irregular curvatures or directions of the hairs, may occur in patches of three or half a dozen in one spot, or take place in single hairs all round the eyelid; or again, be in connexion, as they often are, with complete or partial inversion of the lid (entropium). I have remarked in this country, that this particular form of the affection more frequently occurs in the lower than the upper lid, and oftener in light haired than in dark-complexioned persons, and



also that the hairs are generally finer in quality ; in some instances they are so very delicate as to be with difficulty discovered without the aid of a magnifying glass and a good light. A thickened and irregular nodulated state of the tarsal margin of the lids, generally accompanies this form of the disease, to which has been applied the term *Trichiasis*.

The third form of the abnormal condition of the eyelashes is that denominated *Distichiasis*, and consists of a preternatural or supernumerary development of hairs, called *pseudæ cilia* ; in fact, a double row of eyelashes internal to the normal row. This may exist with or without inversion of the cartilage ; it may be partial, or confined to a spot from a line to half an inch in length, or these new hairs may be irregularly scattered along the whole palpebral aperture. The same general symptoms which mark the entropium, in intensity commensurate with the extent of the disease and the violence of the irritation, attend this affection. The fact of an additional growth of hairs has been denied, and it is asserted, that “ although they issue from the wrong place, and grow in a wrong direction, they are not new productions, but merely natural cilia, the bulbs of which have been displaced by disease affecting the border of the eyelid ;”<sup>\*</sup> and had I not several preparations in my possession, which show an undoubted additional growth of these hairs, I should be very slow in differing from this, one of the highest living authorities upon ophthalmic surgery. In these cases, however, I not only examined the tarsal margins minutely after their removal, but counted the cilia, and they invariably amounted to more than what occurs in health ; although it must be acknowledged that the number varies even in a healthy or natural condition.

Preternatural growths of hair from other parts of the eye (the conjunctiva for instance) where they did not originally exist, are not unknown to ophthalmologists. Mr. Lawrence acknowledges that “ there is a partial series of cilia produced on the inner margin of the lid, in addition to the natural row.”

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<sup>\*</sup> Mackenzie on Diseases of the Eye.

Let this brief description suffice to remind the reader of the most prominent symptoms, and the varieties of these diseases of the tarsal margins and the eyelashes, more detailed accounts of which will be found in the special works upon diseases of the eye. I have observed more of this disease in Ireland than any country I have ever visited, except Egypt; and I believe that a granular condition of the conjunctiva palpebrarum will also be found to exist more frequently in a given number of diseases of the eye, in this kingdom, than in any other. In Vienna, the great centre of attraction for diseases of the eye, and the great school of ophthalmic surgery, these diseases are rare in comparison with their frequency here.

The endurance of, or the indifference of the Irish people, to such severe suffering as the complete entropium causes, is really astonishing; it is not unusual for cases to present themselves for the first time for advice, and that, too, before the cornea has become nebulous or insensible, as we know it will after long continued irritation, when the disease has been from six months to two years' duration. Many of these cases, occurring chiefly in middle aged females in the very lowest walks of life, who reside within the city, were content to remain in this lamentable state for the length of time I have mentioned; merely employing to use their own expression, "a drop of eye water," and clipping the inverted eyelashes with a scissors from time to time!! very few of these people availing themselves of the palliative means of plucking out the offending hairs with a forceps or tweezers. This disease, or rather the disease which produced it, is one of very frequent occurrence among that class of poor women who sit in the streets, under archways, or at the openings of lanes and entries, selling fruit, fish, confectionary, and articles of that description; and who are, by their occupation, exposed to all the hardships and vicissitudes of our variable climate, with no other external covering than a threadbare grey cloak; their feet being protected only by a pair of thin, broken slippers; sitting upon a handful of damp straw; and their heads covered by an

habiliment that seems the almost invariable attendant of "sore eyes,"—the remains of an old black beaver bonnet.

As regards the causes of entropium, I believe, in most instances (not traumatic), it will be found to result from inflammation, in some form or other. Without entering into the history of the opinions put forward by the ancients, which will be found enumerated at length by Mr. Guthrie, in his *Operative Surgery of the Eye*, I think the modern notions on this subject may be divided into,—relaxation of the external integument; unequal muscular action; ulceration and contraction of the tarsal margin of the lids; and a contracted state of the folds of conjunctiva forming the external and internal tarsal ligaments, by which means the levator palpebræ muscle acts on the lower portion of the cartilage, and turns it in, as stated by Sir Philip Crampton; but this can only apply to the upper lid. Others ascribe the inversion to a vicious turning in of the cartilage, without advancing any remote or proximate cause for such. General contraction of the conjunctiva lining the lids has also, among other reasons, been advanced by writers; but this solution of the question has not been advocated with that firmness, which, in my mind, it seems to deserve.

Upon some of these hypotheses most of the operations devised for the cure of this disease have been grounded; and no doubt, cases will be found to support each of these opinions, in whole or in part, and also requiring each of the operations recommended. But it is of that particular form of inveterate entropium, especially of the upper lid, where the inversion takes place in a chronic form, and where there is no more inflammation of the eye-ball than that produced by the irritation and unnatural condition of the cilia, to which I would more particularly call the attention of my readers.

The idea of the relaxation and swelling of the integuments of the lids being a *constant* cause of inversion of the lids is now nearly exploded, and it is evident that it cannot produce those partial turnings in of the tarsal margin which are frequently met



with in practice, nor can it in anywise cause either the trichiasis or distichiasis. But that it *sometimes* conduces to the acute form of general inversion of the lids, which occurs in the severe inflammations of the eye, we see numerous instances to support the opinion. This has been well explained by Dr. Mackenzie ; and that it *assists* in causing the chronic and atonic inversion of the lower lid in old and relaxed people, when the subjacent fat is absorbed, there is likewise, I think, little doubt. But I am also of opinion, that even in such cases, there always exists a cotemporaneous contraction of the conjunctiva lining the inferior palpebra.

With regard to the supposed *unequal* contraction of the orbicularis palpebrarum muscle, or the increased action of the levator palpebræ, or indeed any action of this latter, it does not appear that the case has been fully established ; and even if they do exist in keeping up and increasing the inversion, it is *only as a secondary effect, after the cartilage has been already unnaturally bent in by the contraction of the conjunctiva.*

The assumed paralysis and relaxation of the levator palpebræ, as asserted by Mr. Ware, has been already tested, and will not, I imagine, have many supporters in the present day. Although ulceration and contraction of the tarsal cartilage, along its free margin, may produce some partial inversion, and no doubt produces dislocation or irregularity of individual hairs, there is wanted proof of its being a cause of any very extensive turning in of the whole upper lid. And that the disease does not generally arise from the tightening and contraction of the palpebral aperture, we learn from the fact, that in cases of severe entropium, it will be found upon examination that the lids do not fit more closely to the eye than natural, except so far as is produced by the spasmodic action of the musculus ciliaris ; and that, although they return to the inverted position immediately after, still that they can with ease be lifted off the globe of the eye. Again, if such was the case, why not have the disease always occupying the entire free margin of the lids ? why have it so fre-

quently in the upper lid? and how could partial entropium of any one portion of it take place, the tarsal ligament acting equally on the whole extent of the conjunctiva and cartilage? Moreover, if it arose from a too tight condition of the margin of the lid, why not have the puncta more frequently dislocated—more frequently drawn outwards, or preternaturally inwards, which is never the case.

From what I have observed of this affection, I am induced to believe that in almost every instance severe chronic entropium (not depending on accident) is the result of *thickening and contraction of the conjunctiva lining the lid*, caused *in limine* by chronic inflammation; and then, no doubt, the first turn or vicious bend having been given to the tarsal margin of the lid by the mucous membrane, which is there so intimately attached, that we might say it was inserted into the cartilage, the muscular apparatus attached to the appendages of the eye comes into play; and the winking, which is so constant an attendant on this disease, although at first a natural effort to rid the parts of the offending hairs, soon becomes, owing to the increased action of the orbicularis muscle, not only a cause for keeping up, but also for aggravating the affection.

Sir Philip Crampton was well aware, when he wrote his essay,\* of the part which the contracted conjunctiva played in the formation of entropium; and on a careful examination of his views, one only wonders he did not follow up these opinions in the line of treatment which he subsequently adopted, or adapt his operation to the removal of a pathological effect, of which he was to a certain extent cognisant. He gives it as his opinion, that the loose folds of conjunctiva, reflected from the globe to the upper margin of the tarsal cartilage, become in particular states of disease contracted; and he illustrates the effect which such a condition would produce by the experiment, which any

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\* An Essay on the Entropion or Inversion of the Eyelids—by Philip Crampton, M.D. London, 1805.

one may perform upon themselves, by holding the lashes of the upper lid, and drawing it downwards, and then rolling the eye upwards, when the strain on these folds of conjunctiva will be instantly felt. And in support of this opinion, he says: "When the contraction increases (and we know that a disposition to contract is common to all secreting membranes), so that the folds are not only obliterated, but that the internal membrane becomes actually shorter than the external integument; the margin of the tarsus deriving no support from without, and constantly acted upon from within, readily yields, and becomes permanently inverted." The contraction of the membrane, to which I would, however, call the attention of my readers, is not to that occurring in the upper loose folds of the reflected conjunctiva, which could, at best (if so affected) draw the whole lid upwards and backwards, and could not exert any power on its free margin, but a contraction of the conjunctiva *lining the cartilage*, and chiefly that part running parallel with and about the eighth of an inch from the tarsal edge of the lid.

That a contracted state of the *reflexion* of the conjunctiva will not cause inversion of the cartilage to which it is attached, I have reason to conclude from several cases that I have lately witnessed. In one of these instances now under my care, where, from the effects of long-continued chronic ophthalmia, and a granular condition of the lid, the folds so often referred to have been obliterated, although the granulations have long since been removed, the upper margin of the superior tarsal cartilage is bound in so tightly to the eye, that it is with great difficulty the lid can be everted; and when the ball is turned upwards, the lid is forcibly carried backwards and upwards also—yet here no inversion of the margin has taken place.

Again, we daily witness cases of inversion of the lower lid, in which, from the greater facility of examining, we can satisfy ourselves as to the condition of the conjunctival reflection; and we do not find any obliteration of the folds, which to a certain extent exist there also; or any contraction of the membrane where it passes from the globe to the lid, while we shall almost



invariably observe a line of contraction running along the inner surface of the lid, between its margin and the angle of reflexion, similar in appearance to that which will be found upon the upper lid.

Since my attention was directed to the subject, I have made it a rule, before adopting any line of treatment, to examine with care the internal surface of the lids. In several cases the conjunctiva was in a state of chronic inflammation, and frequently granular, but this may be a consequence of the irritation, and not a cause of the disease. In other cases, even in the very early stage, and before much irritation had ensued, the lid, upon being everted, exhibited a number of pale, shining, whitish-coloured lines scattered over the surface of the conjunctiva, but chiefly running along its lateral extent, and resembling in appearance the cicatrices and contractions left upon this part after the cure of granulations. The inner surface of the lid, moreover, if carefully examined both on its plane aspect and in profile, will be found to present an irregular, *puckered* appearance, and its redness to exhibit a mottled character, varying in depth and intensity in different parts—characters very difficult to explain in writing, or even exhibit, without the aid of a coloured representation. This contracted state of the lining membrane may take place without any very apparent or troublesome inflammation being present, and is often, I believe, a slow chronic process, of which the individual is frequently unconscious. This action and this effect may be local or general over the whole surface, and thus produce the entropium of a part or the whole of the lid; and when once the irregular turn is given to the cartilage, on which from its close connexion it must act, the muscular apparatus so often referred to in this paper, particularly that part of the orbicular muscle denominated *musculus ciliaris*, comes into play, and completes the inversion.

The frequency of entropium among the lower orders who neglect their eyes, and its rarity in the upper walks of life, adds strength to this opinion. “The consequence of this neglect,” says Sir P. Crampton, “is excoriation and consequent contraction of

the skin at the external angle of the eyelids, followed by a contraction of the fold of conjunctiva, which forms the internal ligament of the tarsus." From this, and the general tone and bearing of his work, as well as from the principle of the operation which he has introduced into practice for its removal, we gather that he conceives the contraction of the membrane occurs in such a manner as that the palpebral aperture is lessened in its extent, or decreased from within outwards, whereas, with all due deference to this very high authority, I respectfully submit that the contracting process takes place in almost every instance of inveterate entropium from above downwards, decreasing the breadth and not the length of the lid. To our distinguished countryman however, is undoubtedly due the credit of the first solution of the problem as to the cause of entropium, namely, conjunctival contraction in the first instance. This difference of opinion as to the mode in which it acts, although apparently at first sight of little value, is in reality of great importance in a pathological point of view, for on it are to be grounded the operations for the relief of this most harassing disease. Furthermore, the operations of Messrs. Crampton and Guthrie frequently fail, unless these very contractions and tight, adhesive, band-like portions of the conjunctiva are divided.

With respect to the causes of triachiasis (and perhaps the same power may produce distichiasis also), I have in the first instance to remark with Scarpa, that the cilia are not, as was generally supposed, set upon the cartilage in a single row or line; but that what upon a superficial view appears so, is in reality an irregular triple line where they pierce the integument, and in a kind of *chevaux-de-frise* manner they cross or meet each other towards their extremities. From this it follows, that the hairs cannot run parallel to each other from their roots to their external appearance, and upon a close examination we find that the bulbs of these hairs are not only very irregular, but also diverge widely as they sink into the structure on which they are placed. In psorophthalmia, and particularly in *tinea palpebrarum*, when inflammation attacks the whole margin of

the eye-lid (especially the upper), and the cutis swells considerably, while small abscesses form round the roots of the individual hairs, and the entire surface in some cases presents a condylomatous appearance, the interspaces between the cilia enlarge from the unhealthy deposit in the part, so that the natural position of these hairs is reversed, being then more divergent where they pierce the skin than at the roots; and they likewise exhibit a bushy, very irregular, and distorted appearance in a well marked triple or quadruple row. Now, although the original disease that produced this state may be speedily removed, still the fibrous deposit along the margin of the lid, which altered the relation of these hairs, remains to a certain extent, and keeps up their deformity or unnatural and distorted condition in whole or in part, so as subsequently to produce the disease called trichiasis, the apex of the line of hairs being then at their roots along the cartilage, and the base at their fine extremities. I have watched this process going forward so often, that I have satisfied myself of its truth, and have had several drawings made of the affection in its various stages to exhibit it. It is possible that distichiasis may be produced in like manner, and the inflammatory action may be propagated from the margin to the inner surface of the lid, and thus producing contraction, give rise to entropium—so frequently met with in connexion with trichiasis. In such cases in particular, the granular, condylomatous, hard and thickened margin of the lid is very apparent.

For the relief of the various forms of this disease (entropium trichiasis and distichiasis), the operations and methods of cure may be divided into the palliative and the radical: the former consisting of the removal of the offending hairs as often as they require it, or the temporary application of straps of adhesive plaster, pads, glue bandages, and other mechanical contrivances to retain the lid in such a position as that the cilia may no longer offend the globe of the eye; as well as the sticking together by gum and such other glutinous substances, small packets of the hairs, whereby the normal ones support the irregular or inverted ones.



Now although the relief by all such means is but temporary, yet as many old or timid persons will not submit to the employment of any other means, the surgeon should be well acquainted with the varieties of these methods of treatment. The latter, the radical method, consists of such surgical operations as will either return into its natural position the inverted cartilage, by removing a portion of the integuments of the lids, or acting on them with escharotics, or by division of the tarsal margin of the cartilage, so as to free it from any preternatural tightening, as supposed by some to be the cause of this complaint; and this modified by various incisions, and such subsequent positions of it in the healing process as will make it retain the natural position;—or by removing in whole or in part the hairs and the substance in which they are set.

It is not my intention to describe minutely, or to enter into a discussion of the relative merits of each of these methods of cure; but to contrast the operations with their subsequent effects upon the eye, recommended for the cure of entropium by Sir P. Crampton and Mr. Guthrie on the one hand, and those performed by Professor Jäger and Mr. Saunders on the other.

Those acquainted with the beautiful anatomical mechanism of the eye-lids; their admirable adaptation to the eye-ball in all its various positions—their action not only as curtains to shield the globe from all extraneous substance, but also (the upper lids in particular) by the thin stratum of fluid which, if I may so say, lines the external surface of the eye, preserving the necessary moisture and polish of the globe—know full well the necessity of preserving intact the proper position of the *puncta lachrymalia*; the adjustment of the margin of the lids to the surface of the globe; the integrity of the tarsal ligaments and tendon of the orbicularis muscle; and, above all, the preservation of continuity of the edge of the lids, in order to keep in a healthy state the delicate provisions of this most wonderful apparatus. Should it then become necessary to interfere with these parts, in order to alleviate or remove disease, the surgeon should bear in mind not

only the parts he has to deal with as regards their structure, but also the functions which they are intended to perform in this piece of optical mechanism.

Mr. Ware, on the supposition that entropium arose from the "ciliary edges" being "not only inverted, but likewise contracted in length," advises the "enlarging the circumference of the ciliary edges," and says, "this may be done either by an incision at the outer angle, or by a complete division of the cartilage called tarsus in the middle." Mr. Tyrrell and Mr. Wharton Jones still partially adhere to this form of operation.

This method not succeeding, Sir P. Crampton devised the operation so well known and so constantly practised in this country, of dividing the tarsal cartilage at its internal and external extremity; the former incision beside the punctum, and the latter at the external commissure, in order to include the tarsal ligaments; when, if the inversion (I write of the upper lid) is not removed, these perpendicular incisions are united at their extremities by a longitudinal one, running parallel with the ciliary margin of the lid. The parts are held thus in an inverted condition by a *suspensorium palpebrarum*, for some days, in order *to restore to its natural position* the inverted cartilage. These are the principles of the operation; the subsequent dressing and after-treatment are known to most students in this city. In some cases, Sir Philip has been obliged, in addition, to glue down the lashes to the integuments, and to apply other mechanical means to bring back whatever deformity remained after the incisions. This method of cure was first propounded in 1804. In 1838, Mr. Guthrie writes: "Mr. Crampton's operation, then, as above described, appears to have succeeded perfectly in his hands; that it has been found insufficient in that of others is equally certain, arising, I believe, from the unequal effect produced by the *suspensorium*, and from its not acting in a sufficiently powerful manner, in the inveterate curvatures of the cartilage, on its bent extremities; and from his attention not having been directed towards them, and the establishment of a countervailing force: all of which indications

are necessary to be, and are, I believe, fulfilled in the worst cases, by performing the operation in the manner I shall point out."

Two perpendicular incisions, of from a quarter to half an inch in extent, or of a sufficient length to render the eyelid quite free, are made through the lid, one close to the external angle, the other at a short distance from the punctum lachrymale; and these incisions are, he says, to be "continued, if necessary, by repeated touches with the scissors, until that part of the eyelid containing the tarsal cartilage is perfectly free, and is evidently not acted upon by the fibres of the orbicularis muscle, which lie upon it." The portion of the lid included in these incisions is now to be everted, and retained against the brow, when he continues, "if any lateral attachment be observed acting upon and drawing or confining the lid, it is to be divided, which is, in fact, still elongating the incisions;" but as these incisions, extended as they are, will frequently fail in turning outwards the incurvated margin of the cartilage, as is acknowledged by Mr. Guthrie himself, he recommends the division of the cartilage along its whole length, from point to point of the lateral perpendicular incisions, thus leaving the lid connected with the surrounding parts merely by the external integuments, and the fibres of the orbicular muscles. Not deeming this sufficient, or the vicious turn of the lid still remaining, he advises "a fold of skin to be cut away from that part of the eyelid included between the incisions," as close as possible to the ciliary margin of the lid; three or four ligatures are then passed through the divided edges of this latter incision, and made also to include the outer or lower edge of the lid itself, which is then retained upon the brow by means of these ligatures, fastened upon the forehead by pieces of adhesive plaster. "In order to prevent any attempt at union but by granulation, or a filling up of the incision, the edges are to be slightly touched with a *sulphas cupri*; a compress and retaining bandage is then applied, but removed next day, when any adhesion that may have taken place at the angles



of the incisions, is to be removed. On the third day the edges of the incisions are again to be touched with the sulphate of copper, the lid being still retained in its inverted position ; when “in a few days more,” continues the describer, “and especially by the continued elevation of the lid, the ligatures cut their way out, during which period the eyelid is gradually lowered, and by the time the incisions have filled up, it will have resumed its natural situation, and the cure will have been completed, with, however, two indentations in the ciliary margin of the tarsus, and it may be, the continued inversion of two or three detached and irregular hairs.” This operation, it will be seen, differs from that *originally* described and recommended by Sir Philip Crampton, only in its magnitude and severity ; in making the longitudinal incision of the conjunctiva, as recommended by Cælius and Sir Philip, extend through the cartilage, and in retaining the everted lid upon the brow, by means of ligatures, with greater security than could be achieved by the suspensorium palpebrarum. Mr. Guthrie very judiciously cautions the operator to avoid the division of the punctum, but observes, “that the operation, accomplished with all the care I have described, will still fail, if equal attention be not daily paid to the subsequent dressing, on which indeed more depends than on the operation itself ; so much so, indeed, that I am disposed to consider inattention to it the most certain cause of failure.”

Before I proceed to remark upon what appears to me the defects of this operation, let us turn to that recommended by Mr. Saunders, who, in recommending the complete removal of the cilia, and in describing the sufferings induced by the harassing disease of entropium or trichiasis, most justly observes : “This picture which I have drawn, although melancholy, is not overcharged. Considering that I am addressing men acquainted with human misery, it may be deemed superfluous ; but I am anxious that this truth should be impressed on the reader’s mind, that the excision of the tarsus and roots of the cilia, how-

ever severe and formidable in apprehension, is instituted for the cure of a most excruciating disease, and that the occasion demanding it is imperious." With this rule, so admirably expressed, I fully concur.

Saunders performed his operation thus: having placed a piece of thin horn beneath the affected eyelid, in order to afford a resistance behind, as well as to guard the globe from injury, he made an incision posterior to and along the whole length of the cilia, and extending from the punctum to the external angle, when the entire tarsal margin containing the eyelashes was dissected off.\* No subsequent dressing was applied, or deemed necessary; and in a few days union took place between the integuments and conjunctiva.

This operation was subsequently modified by Professor Jäger, of Vienna; and this I shall presently describe as that which it appears to me is best suited to the removal of entropium and trichiasis. When once a cartilage, particularly that of the eyelid, has become distorted, and has remained so any length of time, I have always found it a matter of exceeding difficulty to restore it by any artificial means to its natural position, even although the original exciting cause may be removed. During the Summer of 1842, I was assisted by Mr. Hamilton and Mr. Grimshaw in two plastic operations, for the removal of ectropium, the results of burn and ulceration. In both of these, although the transplanted lid formed a perfect and sufficient covering to the eye, yet for many weeks after, that portion of the cartilage which had been most distorted, and was, if I may so say, puckered by the original cicatrix returned, in part at least, to its original position, and protruded at the palpebral aperture; nor could this defect be remedied till an incision was made, in both instances, through the lid, from without inwards; and the edges of the divided portion of cartilage having been drawn

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\* To Razes we are, I believe, indebted for the recommendation of the removal by excision of the entire ciliary margin of the eyelid. See also Heister's Surgery, Part II. p. 370.

through the external wound, and retained there by sutures, the adhesion thus produced remedied the defect. And it is this difficulty of turning back an old inveterate case of entropium which often renders the operation by incision inefficacious, in the more advanced stage, which might have been, in all probability, cured by it in the earlier period.

All practical oculists seem aware of the inveterate and almost incurable bend or turn which the tarsal cartilage takes, and of its continued liability to return, even long after the operation. This was long since clearly proved by Saunders, who, in remarking upon the operation of incision, says: "although by detaching it from the external and internal canthi, and by keeping it everted for a considerable time, until the incisions be healed, the ciliary margin may for a time be clear of the eye, yet this flattering appearance, increased by the temporary relief of the patient, together with the returning transparency of the cornea, the friction being taken off, is but of short duration. *The altered state of the tarsus, preventing its accommodation to the surface of the globe, is not corrected*; and so great is the tendency of this diseased substance to incurvate, that the inversion of the eyelid is very soon again confirmed."

I offer no excuse for these lengthened quotations from Mr. Saunders' invaluable work; they are so just, so practical, and it appears to me, so thoroughly based on long experience and extensive observation of this disease, and his opinions are so well expressed, that I feel they must have more weight than any thing I could offer on the subject. I was led to adopt views similar to these, from being applied to at my dispensary by numbers of persons who had been already operated on at various periods of their lives, by different methods, and by different individuals, for the cure of inversion and distortion of the eyelashes, in which, although temporary relief had been obtained by each surgical effort, still the unnatural condition of the cartilage and eyelashes returned in whole or in part, and the distortion of the margin of the lid, from the effect of the various operations, was



not only disfiguring, but positively destructive to the mechanical adaptation of the appendages of the eye. Let the following case stand as an example of many.

Edward Connor, æt. 31, a native of Belturbet, one of the Society of Religious Brothers, applied at the dispensary in July last, with both trichiasis and entropium of the upper lids, and a few distorted hairs upon the right lower lid; the corneæ nebulous and vascular; the vessels running in straight lines, and chiefly from above downwards, over that portion of each cornea fretted by the cilia, which were thick, bushy, irregular, and light in colour; the lids slightly œdematous, and their margins thickened, red, and irritable. There are two gaps, about the eighth of an inch in width, and a line in depth, in the margins of both lids. He holds the head downwards, and complains of great irritation, heat, smarting, pain, and scalding in the eyes, with profuse lachrymation. He is continually winking; his skin is cold and clammy; has profuse night perspirations; the tongue is thick, white, and clammy; complains of loss of appetite, thirst, and restless nights. Upon the upper lids there are several scars and cicatrices, distinguished by their whiteness from the surrounding integument. The palpebral aperture does not seem contracted, and the lids can be easily lifted off the eye, but a considerable difficulty is experienced in everting them, apparently owing to the contracted state of the conjunctiva, which presents the mottled, contracted, and irregularly lined appearance which I described at page 107, and which I believe to be the cause of the inversion. The history which he gives of his disease is to the following effect. He states that about fifteen years ago, he was first affected with that description of "sore eyes," which, from the account he gives, I believe to have been ophthalmia tarsi, and for this he had an issue placed in his arm. Three years afterwards he was placed under the care of a distinguished army surgeon, who put a seton in the back of his neck, and applied caustic plasters to his temples. At this time the lashes had begun to turn in, and to remedy this, a perpendicular incision (I suppose that

recommended by Mr. Ware) was made through the right lid ; this affording but slight relief, the inverted lashes were removed as often as they grew, and a strong acid was applied to the outside of the lids thirty-four times. He likewise underwent two courses of mercury. By this time (1827), the irritation and inflammatory condition of the eyes were so much removed, that he was enabled to return to his original occupation, that of a shoemaker ; but he was obliged to remove the hairs with a tweezers almost daily. In this state he remained till 1830, when another army surgeon removed an elliptical portion of integument from each lid ; but not finding it succeed, and being told that enough had not been removed, he submitted to a repetition of the operation about a month subsequently. This latter gave partial relief, and in this state he remained for about six years, removing the lashes from time to time, but being liable to attacks of inflammation from cold, increased growth of the hairs, or any other irritating cause. In the year 1834, however, his vision and general health were so much impaired, that he was obliged to give up his trade, and was received into the Thurles Monastery as one of the lay-brothers. Distressed and wearied with the constant irritation of his eyes, and with being obliged to pluck out the lashes daily, he came to Dublin in May last (1843), and was received into one of the hospitals, where the operation advised by Sir Philip Crampton was performed on both eyes. During the five weeks he remained in the hospital subsequent to the operation, he was, to use his own expression, "all but well ;"—the eyes, however, he states, have watered much more since the operation than they did before ; and he says he feels the lid even tighter than it was previously.

On the 28th of August I removed the entire cilia of the upper lids of both eyes, by Jäger's operation, and everted the two curved cilia in the lower lid of the right eye, by cutting down upon them, and applying nitrate of silver to their roots. I have seen this man constantly from that period to the present ; the corneæ have become quite clear ; the pain, irritation, and

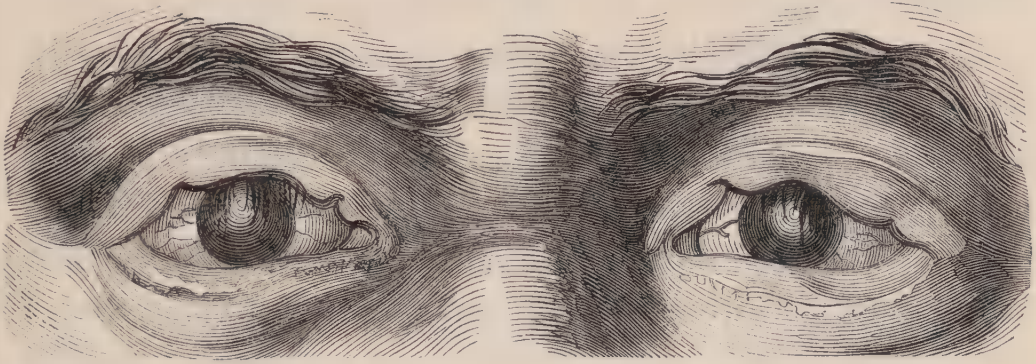
suffusion of tears have ceased, and his constitution has become "quite repaired." The margins of the lids were for some time after the operation touched with sulphate of copper, and the dilute citrine ointment occasionally applied at bed-time; and at a more advanced period, the wine of opium was dropped into the eyes every morning. The solution of the hydriodate of potash, with tincture of iodine, was likewise administered internally. The integuments and conjunctiva have united; the edges of the lids are perfectly smooth, and present a slight pinkish appearance. None of the cilia have since appeared, and although the cartilage is still partially inverted, it produces no annoyance or disfiguration. The lids, with the exception of the want of cilia, present a natural appearance, and the gaps which previously existed in their margins, from the former operations, are scarcely perceptible. Such was the relief which this poor man experienced, that, when asked to-day how he did, his answer was, "oh, I am in heaven!"

"The operation proposed by Dr. Crampton," says Saunders, "is highly successful, and, as I am inclined to think, unexceptionable in the earlier periods of the disease, before an unconquerable inclination of the tarsus towards the globe is produced; but in this ultimate and inveterate state of the disease, in which the contraction is often consequent on the cicatrization of the tarsus itself, it is altogether inexpedient." In commenting (I must say rather severely) upon this opinion, with which I perfectly coincide, Mr. Guthrie writes as follows: "But as the alterations I have made in Mr. Crampton's method render it, in my opinion, equal to the cure of every stage of the disease, and as so many more cases of it have come under my observation, and have been cured by the operation I recommend, since the publication of the first edition of this work, I feel myself bound to add, that any surgeon who shall mutilate his patient, without having previously tried it, and failed, will be liable to the severest reprehension." That, however, it will fail, even when performed according to the plan, and to the full extent,



recommended by Mr. Guthrie, I have seen numerous examples :—let the following suffice.

Eliza Haberlin, æt. 27, the appearance of whose eyes upon the 4th of January, 1843, is exhibited in the accompanying engraving, states that she had weak eyes from childhood, and that



about seven years ago the lashes began to turn in, and the margins of the lids had become red and sore. After going through the usual progress of the disease, and being affected with the usual symptoms, the corneæ became dim about four years ago. A year afterwards, she came to Dublin, was received into hospital, and operated on by Guthrie's method ; the lid was held up by means of sutures and adhesive plasters, she says, for upwards of ten days. By this operation the lashes were for a time turned out, and she left the hospital with a promise, that the corneæ would soon clear. This, unhappily, has not occurred, for the lashes, as will be seen by reference to the representation, still lie upon the cornea as bad as ever, but the lid does not press upon it with such severity.

Her appearance, and the character and condition of the eyes when I first saw her, in the early part of January, in this year, were as follows : both corneæ were semi-opaque, whitish like a macerated ligament, more conical than natural, and traversed by several tortuous red vessels. The conjunctiva of the globe was of a yellowish red colour ; and around the cornea of each eye there was an irregular circle of fine pinkish vessels, while the whole surface of the globe was remarkably insensible to the touch, and almost approaching to xeroma. The rimæ of both palpebræ were irregular, fissured, and considerably distorted, owing

to the gaps left by the perpendicular incisions of the previous operation ; the hairs grew chiefly from the centres of the upper lids, which were still inverted ; the hairs on the remaining internal and external portion of both upper lids, and particularly near the margins of the wounds, were in that state denominated trichiasis, growing, in fact, in every direction ; the puncta lachrymalium, in both lids of the eyes, were considerably distorted ; and the tears, which were secreted in great quantity, and trickling down through the gaps in the cartilage, distilled over the cheek, and very little of the lachrymal fluid seemed to pass through the puncta ; both lower lids were everted ; their cilia scanty, and irregular ; the conjunctiva red, and velvety ; and the integuments beneath each lid were ostensibly tightened and contracted. On everting the upper lids, the irregular, puckered, and contracted state of the conjunctiva was apparent, and such as I have already so frequently alluded to. The brow was, as usual, corrugated ; there was, however, little intolerance of light, and she was able to find her way through the streets.

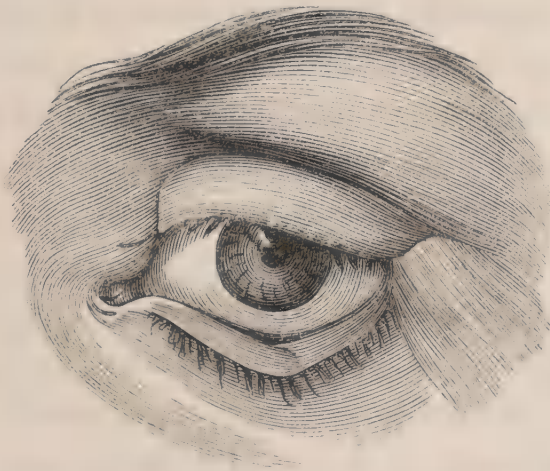
As a chance still remained of preserving some vision, and as she earnestly requested to have the hairs completely removed, I performed Saunders' operation on both upper lids. This was rendered necessary by the unnatural, distorted condition of the cartilage, and the gaps or fissures already made in its margin. A portion of the integument, with an irregular slip of cartilage, and all the cilia were removed, from the punctum to the external commissure of one eye ; the skin of the lid was then brought in contact with the margin of the conjunctiva lining the inner surface of the cartilage by a couple of fine sutures—cold water dressing was used for the two days following the operation ; and on the third, the sutures were removed. The edges of the lids have adhered by the first intention, and now present fine smooth margins ; the exposed surface of the under lid has been touched with the sulphate of copper every second day, and the wine of opium dropped into the eyes on the alternate ones. The same course was adopted with the second eye.

Feb. 12. She has experienced the greatest relief since the



operation, and says she can find her way much better. The upper third of the cornea in the right eye has certainly become clearer; the tears do not now run over the cheek, as before, and the general appearance of the eyes and the countenance is much improved. Should the cornea continue to clear at any one spot round its margin, it is within the range of possibility that an artificial pupil might afford further relief. But it cannot be expected that any great or general improvement of the opacity of the cornea will take place. Had, however, the operation of excision been performed in this most inveterate case, in its early stage, I firmly believe that the only difficulty or deformity which this poor woman would now labour under, would be the loss (if such it can be termed under these circumstances) of the eyelashes, and an occasional redness of the tarsal margin of the lids.

Again, let us examine into another circumstance, with regard to this operation of division, or perpendicular incision of the tarsal cartilage, even when it succeeds in completely turning out the lashes—namely, its subsequent effects on the mechanical adjustment of the parts subsidiary to the organ of vision. This effect, it is to be remembered, is not an immediate one; it is not to be observed on the patient's leaving the hospital, nor perhaps for many months after. This illustration will explain my meaning



better than words. This drawing was made in August, 1842, from the eye of Michael Murphy, æt. 60, by trade a file-maker, and residing in the Liberties. He states that six years before, he was operated on for the turning in of his eyelashes;

and from his description of the operation it appears to have been that recommended by Mr. Guthrie; for his lid was "kept



turned up for many a day after the cutting." He states, that he experienced considerable relief for several months after the operation, only that "the eye was always watery;" that towards the end of a year or fifteen months, the upper eyelid began to curl up, and the lower to fall down, till it assumed the appearance delineated in this wood-cut; that "the tears are now evermore flowing over;" that he is unable perfectly to close the lids; and the eye, from being more exposed to the effects of his occupation than natural, is continually inflamed and irritable. Such is his story. The parts now present the following appearance: two extensive gaps exist in the margin of the upper lid; one of these will be observed at the outer angle, the other at the punctum lachrymale, which the incision seems to have divided obliquely; the cilia are all in a perfectly normal line with one another, but do not turn outwards and upwards, but downwards and forwards, owing to some remains of the entropium; the hairs, however, do not touch the globe. The lower lid hangs downwards, in an angular manner, and its conjunctiva is red, thickened, and villous; he is unable, even by squeezing, to bring the lids in apposition; the upper punctum is to be found in the *edge* of the inner gap, and the lower looks forwards and outwards, owing to the eversion of its cartilage. The cilia are loaded at the roots with yellow discharge; an erysipelatous redness exists all round the eye, but particularly along the upper thickened portion of lid included within the incisions, and about half an inch below the inferior palpebrum, where the skin is smooth, of a pinkish white colour, and so tightly contracted, that it is not possible to restore the lower lid to its natural position, even with the finger.

At the external angle, a band of contracted integuments drew it downwards and outwards, caused in all probability by the irritation of the tears and the discharge which was constantly flowing over it, the *curtain power* of the eye-lid being completely lost, and its adaptation to the globe destroyed. Surely such a state of things as this eye now presents cannot be com-

pared with the trifling inconvenience resulting from the loss of the cilia.

The objections which it appears to me, the operation by incision is liable to, may be summed up as follows:—It does not always remedy the inversion, and although it affords temporary relief in many instances, still the disease, as acknowledged upon all hands, is liable to return, owing either to the vicious and determinate inclination of the cartilage, or to the original cause not having been removed. Judicious and ingenious as the operation of Sir Philip Crampton is in the first stage of pure entropium, without any irregularity of the lashes, it is totally inefficacious where any extent of trichiasis is present; and in a vast number of cases that I have seen after the operation, trichiasis did exist, and therefore the intention of the inventor has neither been fully understood nor acted upon. Sir Philip advises the insulation and eversion of that portion of the lid in which the inverted or irregular hairs are situated, but very frequently these hairs are scattered at irregular intervals, all along the ciliary margin, and each hair would require a separate operation for itself; moreover, the trichiasis, either singly or in connexion with entropium, does not depend upon an unnatural position of the cartilage, but upon an irregular or vicious position of the hair itself, and therefore, to remove the hair from the surface of the cornea by means of any operation upon the cartilage, must be to place it (the cartilage) in an irregular and unnatural situation—all which objections are obviated in the operation by excision or extirpation.

The eyelids appear to be held in their natural position by the tendon of the orbicularis palpebrarum muscle, and also its fleshy fibres spreading over its surface, by the external integument, and by the conjunctival lining, especially those portions of it denominated external and internal ligaments. And upon the correct and accurate position of the eyelids depends the integrity and mechanical power of those capillary, and perhaps erectile-mouthed siphon tubes, the puncta lachrymalium. If,

then, the margin of the palpebral fissure be divided, the sphincter power of the lids is lost ; the lower lid, from want of the support afforded it by the action of the orbicularis muscle, and its attachment to the upper lid, after some time, droops and causes entropium ; the puncta, no longer held in their natural position, do not take up the secretion thrown into the lacus lachrymalis, and the tears, instead of being urged forward by the action of the lids into that receptacle, distil over the eye through the fissures in the lid, and irritating the cheek, increase the eversion of the inferior palpebra. According to Mr. Guthrie's method, the portion of cartilage containing the inversion is completely detached ; and I have seen cases in which, in three months after, it lay flat upon the lid, with the eyelashes hanging downwards and forwards ; and so much difficulty was experienced in raising the lid, that the eye appeared to be affected with ptosis.

The objections urged against Mr. Saunders' operation I have already spoken of. I believe the only valid ones are, that it destroyed the Mibomian glands, and took away from the length of the cartilage, for I do not think any one can consider the removal of the cilia in trichiasis or entropium a loss in any way commensurate with the benefit derived from their extraction.

Did not these cilia return with an almost hydrean force, who would ever think of doing more than plucking them out for the cure of any of the affections I have described ? Who would think of recommending the painful, tedious, and often insufficient operation of making a double perpendicular incision through the tarsal cartilage, each incision half an inch long, connecting these by a longitudinal cut also through the cartilage, removing an elliptical piece of the external integument, turning the lid up upon the brow, and retaining it there for several days with ligatures and slips of adhesive plaster, and applying in the mean time escarotics to the margins of the wounds, and often waiting for weeks before a probable cure is effected ? How many persons pass through life comfortable and happy, and with very good



vision, without any eyelashes at all, or what they have, scanty, and in no wise performing the functions for which these portions of the lachrymal appendages were intended. Why, then, exclaim with such warmth and severity against those who advise the surgical removal of the eyelashes, without any interference with the tarsal cartilage, either in length or continuity of its margin ;

The operation, which I have been in the habit of performing for some time, the facility and good effects of which have been witnessed by numbers of my professional brethren, I will now describe ; merely premising, that it differs from that recommended by Professor Jäger only in one of its stages, and in the application of ligatures instead of allowing union by the second intention.

The surgeon should be provided, in the first instance, with a variety of horn or ivory spatulas, such as those originally described by Saunders, and figured in most works upon ophthalmic surgery.\* They should be made of different breadths and curvatures, to fit the varieties of palpebral apertures, and will be found much more convenient without than with the wire retractor usually attached to them, and they should be at least four inches in length. The patient being settled in a high backed chair, or with the head resting against the breast of an assistant, the spatula is to be inserted beneath the upper lid, for at least half an inch of its length, and held firmly in that position by the left hand of the operator, which rests against the cheek of the patient ; the assistant then, with the fore-finger of his right hand, draws upwards and presses against the superciliary arch the integument of the lid, so as to put it completely on the stretch, and likewise evert, as far as possible, the lashes, which the operator holds down upon the spatula with the thumb nail of his left hand. Before proceeding farther, the surgeon should make himself thoroughly acquainted with the exact position of the punctum, in order to keep clear of it in the subsequent incision. It may also be re-

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\* See Mackenzie, p. 507.

marked, that the more the parts are put upon the stretch, the greater will be the facility experienced in the subsequent stages of the operation, and the more perfect will be its results; therefore, the spatula employed should be accurately fitted to the extent of aperture in each individual case. With a small fine scalpel, more curved than usual towards its point, and having a small indenture in its back, towards the extremity, an incision is to be made through the external integument, parallel with, and about the eighth of an inch behind the ciliary margin of the lid; commencing in the right eye at the external commissure and ending at the punctum, and vice versa in the left. In this incision, which may be varied in its extent from the edge of the lid, according to the quantity of external integument which it may be desirable to remove, the fibres of the orbicularis muscle must be in part divided along their longitudinal course, for the cartilage should be reached at one cut; and the extremities of the incision should likewise curve abruptly downwards, in order to leave no nodulated or rugged margin to the lid in the subsequent process of healing.

Considerable hæmorrhage always follows this incision, the parts being naturally exceedingly vascular, and rendered more so by their diseased condition. Jäger and most operators now complete the excision of the tarsus by slanting the blade of the knife downwards and inwards, and so *slicing off*, by repeated slight incisions, that portion of the lid in which the cilia are placed, and cutting on the spatula, which affords a firm resistance behind as well as a protection to the globe itself. A much simpler and more efficacious plan will be found in throwing aside the spatula, and laying hold of the external angle of the margin of the lid with a fine toothed forceps, such as that which I described and figured among the ear instruments in the last number of this Journal. Then, standing, not in front but on one side of the patient, so that the parts may be seen in profile, with the knife held in that position that its blade crosses obliquely the margin of the lid, from the external tegumentary

incision to a point a little internal to the centre of that flat surface which the lids present to each other when closed, it is made to traverse, with its back kept towards the operator, the whole extent of the part to be removed, while the forceps retained in the left hand draws forwards the slip containing the eyelashes, till the incision is complete ; the assistant still preserving his original position. By this means there is nothing whatever removed from the length of the cartilage, and the cilia, by not being inserted in, but *lying on* the cartilage, are completely removed, and by thus taking off the slip in profile, we see exactly how much we are removing, and can also guard with greater accuracy the punctum.

The whole of what I have now described need not occupy above a minute, and the pain, though it is certainly very severe, is in no wise equal to that experienced in the operation by incision, at least if the patient's expression of feeling is to be taken as a test of such. Upon examining the inner portion of the surface removed it will be found studded over with the black bulbous roots of the eyelashes, which are generally all removed by the incision ; the excised surface of the lid, however, must be accurately examined to see that no root remains, and until the surgeon is assured of this he has not completed his operation. The bleeding is, as I have said, very profuse, and in some cases,—those which may be denominated vascular persons, two or three small arteries, branches of the superior palpebral, pour out *per saltem*. The surgeon must, however, wait patiently till all this ceases, and the assistant should continue to keep the lid elevated as by closure or turning in upon the eye the hæmorrhage will be decidedly increased ; a little cold water and the action of the air will, however, soon arrest the bleeding, at least to an extent sufficient to allow of such an examination as will enable the operator to observe the divided root of any remaining hair, which is fortunately always of a dark colour, no matter what may be the complexion of the patient. Such roots should be laid hold of with a fine toothed or a ciliary forceps, and removed, along



with some of the surrounding cellular substance, by the scalpel or a curved scissors, for if these points are only plucked out there is a possibility of the hairs growing again.

Many operators are now content with the application of water dressing, and allowing the parts to contract and adhere as best they can ; such was the mode of treatment adopted by Mr. Saunders, who, however, adds : “ in all the patients on whom I have operated, a fungus of considerable size has sprouted from the centre of the section.” This induced me to employ two or three points of suture passed by means of a fine sewing needle,\* first through the thin margin of the cartilage, and then including the external integument which is thus brought in accurate apposition with the conjunctiva lining of the lid. By inserting the central one first, and, through its means, holding the lid slightly everted, the two others can be passed with great facility ; they are then cut off close, and removed about the end of the third day, when the wound is generally healed, and no further trouble is experienced, the cornea clearing, and the irritability, epiphora, winking, and chronic inflammation of the parts gradually subsiding. I seldom see the patient again till it is time to remove the ligatures on the third day, but recommend the application of cold water in the interim. The hæmorrhage is generally very salutary, and in thirty-six cases on which I have operated no inflammation worth remarking upon occurred.†

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\* Heretofore there were no instruments so ill made, or so clumsily constructed, as what were denominated “ Surgeons’ Needles ;” they were totally inapplicable to all delicate operations. None of the needles manufactured by the instrument makers are ever so smooth, fine, or sharp, as the common sewing needle. These latter can, however, be made applicable to any of the purposes of operative surgery, by being softened in the flame of a candle, bent to the required position, and then rehardened. And I am not sure that a triangular pointed needle makes its way with greater facility than a well polished round one, although it is possible that a large ligature may follow it with more facility.

† Dr. Jacob, in the 5th volume of the Dublin Hospital Reports, states, that without any incision with the knife, but “ by repeated clips of the scissors along the eyelids, and at a distance of something more than a line from the margin,” he

A greater change, not only in the eyes themselves, but in the whole appearance and expression of the countenance, cannot possibly be imagined, than that produced in a very few days by the operation that I have now described ; the offending bodies being removed, the lids open wide, the head is held erect, and the patient has in truth

“ Smoothed his wrinkled front ;”

for the brow, before so rugous and contracted, has now become expanded ; the frown has given way to a smile, and the whole bearing of the individual is that of ease and cheerfulness, and all this has been purchased with the loss of the diseased eyelashes ! Yet this has been denounced as a “ most cruel proceeding,” a “ dreadful operation,” and a “ mutilation,” for which the surgeon who has not previously resorted to the method of Mr. Guthrie is deserving of the “ severest reprehension !”

This engraving faithfully represents the eyes of Margaret



Heffernan, æt. 34, who was operated on by the method of excision for entropium of two years' standing in September, 1842.

clips away the ciliary margin of the eyelid from the angle to the punctum, including skin, cartilage, and roots of eyelashes. Vacca Berlinghieri, of Pisa, makes a small flap of integument, so as to uncover the roots of the cilia in partial trichiasis, and dissecting them out, or destroying them with acid, restores the portion of integument. Dr. Rainy, everting the lid, extirpates with an extraction knife that portion only of the cartilage in which the distorted hairs are placed, leaving the external natural row. Sir William Adams performed the same operation as that recommended by him for eversion, the removal of a wedge-shaped piece of the lid.

At the period when this drawing was made, the right eye had been operated on one month ; all the hairs had been completely removed, and the lid presented a perfectly smooth, regular margin.

The left eye was operated on a few days afterwards, and with similar success. She remained in the Dispensary for about six weeks, until the vascularity of the cornea had gone off. A short time since I met her accidentally in the street ; the lids had remained smooth and natural ; the redness of their margins, which remained for some time after the operation, had entirely disappeared ; the edges of the upper and lower lids meet perfectly, and the inversion of the edge of the cartilage was scarcely perceptible. This latter circumstance leads me to remark upon an objection which I have heard urged against the operation of excision—that though we remove the cilia, we do not evert the cartilage. This is quite true, but the edge of the cartilage in no way offends the eye, except by means of the hair set upon it ; and it must be remembered that much of the eversion is spasmodic and caused by muscular action, when once the vicious turn is given to the cartilage ; “ the orbicularis palpebrarum,” says Mr. Dalrymple, in his admirable *Anatomy of the Human Eye*,\* “ contracts with a force altogether spasmodic, whenever any irritating or foreign particle falls upon either the globe of the eye or the inner surface of the eye-lids, and by sudden and involuntary closure of the lids, guards this sensible organ from the intrusion of such bodies.” This muscle is antagonized by the levator palpebræ superioris, which is inserted into the upper margin of the tarsal cartilage, and whenever it acts, by drawing the lid with its offending eyelashes over the surface of the globe, it naturally increases the spasmodic action of the orbicular muscle, especially towards its inner edge ; but that it can exercise any influence on the lower margin of the tarsal cartilage in the first instance, I think it remains yet to be proved ; for it

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\* The *Anatomy of the Human Eye*, by John Dalrymple, Assistant Surgeon to the London Ophthalmic Infirmary. London, Longman, 1834.



is very dubious whether any of its fibres extend further than the margin of the cartilage ; and should they even do so one would be at a loss to assign any other reason for it than that of producing an entropium every time it elevated the lid.

Mr. Middlemore's views coincide with mine, and strengthen the opinion I have expressed as to the part which contraction of the conjunctiva plays in the production of entropium : " A thickened, rigid, and granular state of the conjunctiva may," he says, " produce entropium—first, by the undue power of the inner, as compared with that of the outer, membrane of the eyelid—and secondly, by the ocular irritation it excites, whereby a spasmodic action of the orbicularis muscle is produced, and an increased tendency to entropium communicated. I have examined the conjunctiva in this state after its division ; it appears to be shortened, and thickened, and indurated, and the cellular membrane, with which it is connected to the palpebral integument and the muscle beneath, is increased in quantity and firmness, and is arranged in a laminiform manner : at all events, if it be not increased in quantity, it is consolidated with adventitious deposition, so as to have acquired an augmented volume, and a character of semi-cartilaginous firmness." Mr. Middlemore likewise adds, in speaking of Sir Philip Crampton's claim to priority in the assignment of conjunctival contraction as the cause of entropium : " the dependence of entropium on a diseased state of the conjunctiva has been well known ever since the days of Bannister" (1622) ; and the old operation of the longitudinal incision of this membrane proves this ; still Sir Philip Crampton appears to have been one of the first to put this forward in its proper light, although the contraction he speaks of does not occur in the direction he supposes.

In conclusion, the advantages of extirpation, no matter how performed, over all other operations for the removal of inveterate entropium, may be thus enumerated :—the complete removal of the cause of irritation, there being no danger of return, there being no deformity produced, no dislocation of the puncta,

no subsequent stillicidium lachrymarum, no falling or eversion of the lower lid, the integrity of the cartilage being preserved, and the Mibomian glands, which Saunders must have cut across, being for the most part left entire.

In three instances I completely removed the cilia in both lids of the same eye, and with the most beneficial effect. The lower, however, except when affected with severe trichiasis, can be much more frequently cured by the removal of a portion of integument, or the application of an acid, than the upper one.

When an elliptical portion of integument is removed, I have only to remark that it is generally too small, and as far as my experience of this operation extends, unless some fibres of the subjacent muscle are also removed with it, and the ligatures made to include the muscle and the integument, by which means an adhesion is produced that afterwards acts as a counteracting force against the internal contraction of the conjunctiva, little good will result. Furthermore, the upper edge of this elliptical incision should be made as close as it possibly can with safety to the ciliary margin of the lid: it is in general made at too great a distance from it.

A single lash, or one or two lashes, will sometimes turn in upon the eye and produce the greatest annoyance; the patient gets tired of plucking them out, and applies for surgical relief. In such cases placing the horn spatula within the lid, I make an incision with a small knife down to the root of the inverted lash, and, having waited till the hæmorrhage has ceased, I apply a point of nitrate of silver by means of a small *port-caustic* (such as I have already described among the ear instruments), down to the bottom of the wound, and *then* remove the lash; it seldom fails, but frequently it destroys two or three of the neighbouring cilia. Partial distichiasis also, or more extended trichiasis, may likewise be successfully treated by the same means. In the operation of extirpation for entropium, a single lash, or sometimes two or three, may escape the notice of the operator, and will reappear in a few days after

the operation, though not always in an inverted position. Such cases may be treated by incision and the nitrate of silver, or, what is simpler and less painful, laying hold of the surrounding skin and cutting out a V shaped portion with the root of the lash.

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ART. VI.—*Remarks on diffuse Inflammation occurring in the Exanthemata, with Cases, where the Vaccine Vesicle was attacked by it.* By GERALD OSBREY, A. M. M. B., Licentiate of the Royal College of Surgeons, Ireland; Physician to Mary's Dispensary.

TO THE EDITOR OF THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

SIR,—In your Journal for the month of November, 1843, I find, in the review of Dr. Henry Kennedy's work "On the Epidemic of Scarlatina which prevailed in Dublin from 1834 to 1842 inclusive," that there are certain extracts from that work in which allusions have been made to cases in my paper on Diffuse Inflammations occurring during attacks of Scarlatina, published in Dr. Graves's System of Clinical Medicine. As I think that Dr. Henry Kennedy is in error with regard to some remarks he has made on these cases, I shall feel obliged by your inserting in your forthcoming Number this paper.

Your obedient Servant,

GERALD OSBREY.

FEELING deeply thankful to Dr. Henry Kennedy for the very favourable notice he has taken of my paper, I heartily hope that he will consider the following remarks as made merely for the purpose of correcting what I imagine to be an error, and not in any way as intended to detract from the merit of his highly instructive work.

The following are the passages which I wish first to remark on:—"Dr. Osbrey has alluded to three cases where sores on other parts of the body closely resembled hospital gangrene; nothing



of this sort came under my notice: in every instance I saw the edges were deeply undermined, so much so as always to fall inwards, and in this respect to make a marked distinction between the two diseases. Were I to compare the process of sloughing with any other I have seen, I should say it bore a very close resemblance to the usual progress of *cancrum oris*.

“ Another remarkable complication which was seen by Dr. Osbrey, was in a case where, together with the sloughing of the neck, like hospital gangrene, sloughs formed on either cornea, which rapidly extended, and involved the other textures of the eye.”\*

From the latter of these passages, in consequence of a mistake in the location of the words, it would seem that I described the sloughing of the neck as resembling hospital gangrene, whereas it was the disorganized structure of the eye which I stated presented the appearance of that destructive disease. In the original passage in my paper in Dr. Graves's work the words are: “ In each of these three cases the appearance of the part, when destroyed, closely resembled hospital gangrene.”† This mistake however is merely verbal. From the former passage, however, it would appear that Dr. Henry Kennedy considers the circumstance of the edges being undermined in the sloughing ulcers occasionally occurring in scarlatina, as constituting a marked distinction between such ulcers and hospital gangrene. By referring to Mr. Samuel Cooper's *Surgical Dictionary* it will be found, on the authority of that very learned and experienced surgeon, that the edges of ulcers are undermined in the advanced stages of hospital gangrene; his words are: “ As the disease advances the integuments are undermined and slough; and hæmorrhage from small vessels is a common occurrence.”‡ Again, from the authority of the same writer, even if it be ad-

\* Dr. Henry Kennedy on the Epidemic of Scarlatina, pp. 14, 112.

† Dr. Graves's *System of Clinical Medicine*, p. 530.

‡ Cooper's *Surgical Dictionary*; 7th edition, p. 761.

mitted, with Dr. Henry Kennedy, that the sloughing of the neck may resemble in its progress *cancrum oris*, it does not follow that it may not also resemble hospital gangrene. In the commencement of the article by Mr. Cooper on *cancrum oris*, there occurs the following passage: "It is a perfect specimen of phagedenic ulceration, and in its worst forms not unlike hospital gangrene, as I have seen several deplorable instances of."

Though I had opportunities of seeing in the year 1836, in one of the largest hospitals of this city, several cases of hospital gangrene, which exhibited itself in consequence of some obscure and unknown cause, I have preferred quoting from the description by Mr. Cooper of that disease, now fortunately most rare, to contradicting Dr. Henry Kennedy on my own authority; but this much I can say, that so closely did the cases described by me resemble hospital gangrene, that, as far as the appearance of the disorganized structures was concerned, they could not be distinguished from cases of that disease. It is probable that the rarity of the disease may have caused Dr. Henry Kennedy to have fallen into the mistake he did.

The reason why the edges are always found undermined when sloughing has attacked the integuments of the neck is, that in such cases the sloughing of the cellular tissue has preceded that of the tegumentary membrane, the latter being attacked last in the order of succession. In the three cases alluded to by me of sloughing occurring in other parts of the body, the superficial tissues were those which were first attacked; consequently as in ulcers seized by hospital gangrene, the edges were not undermined until the sloughs had separated.

Dr. Kennedy thinks that there is a close analogy between the case in which I have described the eyes as having been rapidly disorganized, and those cases of destructive inflammation of the eye occasionally met with in puerperal fever noticed by Lee.\* In this opinion I coincide; it is probable that similar

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\* Vide Lee, p. 50.

states of the general system, producing a tendency to rapid disorganization of the tissues of the body, gave rise to both. In the local appearances there was however this difference between my cases and those of Dr. Lee, that in the latter there was intense conjunctival inflammation, whereas in mine the conjunctiva was not even red; the loss of vision was the first circumstance which drew my attention to the eye previous to any sloughing having commenced: this case must have differed from those given by Dr. Gregory, and referred to in a note by Dr. Kennedy,\* as the inflammation in Dr. Gregory's cases must have been of a very sthenic character: bleeding, cupping, physicking, and starving having been recommended by him for the cure of it. To have had recourse to such practice in my case, so debilitated was the young patient, would have been almost insanity on the part of the practitioner. It is to be regretted that Dr. Gregory has not more fully described the severe inflammation which he states may seize the eye in scarlatina; he merely writes, in his description of it, "The eye may become affected, and two things may here take place both requiring your attention." "The eye itself may become affected, and this, if neglected, may go on to actual destruction of one or both eyes." "But further, the inflammatory action may lay hold, not of the eye, but of the cellular substance within the orbits in which the eye lies imbedded."†

A mild form of ophthalmia in scarlatina, amounting to little more than vascular congestion, and in scrofulous subjects assuming, on the decline of the disease, the form of scrofulous ophthalmia, has been described by systematic writers‡ on the eye, but there is no mention made by them, as far as I am aware, of destructive ophthalmia supervening in that disease.

\* Opus cit., p. 112.

† Gregory on Eruptive Fevers, 5th edition, p. 128. It appears from a Review in the Number of this Journal for July, 1843, that this work was published subsequently to Dr. Graves's work.

‡ Vide the works of Dr. Mackenzie and Mr. Lawrence.



Dr. Mackenzie, has in the interesting article on phlebitic ophthalmitis in his work on *Diseases of the Eye*, published a case headed "scarlatina, phlegmasia dolens, typhus fever, phlebitic ophthalmitis, and death ;"\* it will be found, however, on the perusal of this case that the destruction of the eye was preceded by an attack of genuine typhus. The case which I have given is, I think, of the same nature as those published by Dr. Mackenzie as instances of phlebitic ophthalmitis. It is to be hoped that Dr. George Gregory and other practitioners like him, possessing great opportunities for experience, when they meet with destructive inflammation occurring in other exanthemata besides variola, will give a full description of its nature. Since the publication of Dr. Graves' work, I have heard of a case having been in one of the large hospitals of this city, in which both eyes were lost during an attack of scarlatina, but I have not been able to possess myself of its particulars.

While on the subject of the occurrence of unhealthy inflammation in the exanthemata, I take the opportunity of giving two cases in which very alarming symptoms presented themselves during the progress of cow-pock, which, I think, in conformity with the opinions of Jenner, Barron, and Ceely, must now be allowed to be an exanthematous affection, Dr. Ceely having proved, almost beyond a question, that it is modification of variola. Dr. Labatt mentions, in his work on vaccination, that he has met with cases in which diffuse inflammation supervened during the progress of cow-pock, and has stated the treatment which he found most beneficial in relieving them ; his cases do not appear to have been of quite so alarming a nature as the two following.

The first was that of a female child, aged 5 years, who had been vaccinated by a respectable practitioner in this city. This child was brought to me about three weeks after it had been ino-

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\* Vide Mackenzie on the Eye, 3rd edition, p. 513.

culated. The arm was then greatly swollen, the swelling extending to the hand; the integuments of the upper arm were of a dusky leaden hue, and a large black slough occupied the situation of the usual crust of the vaccine vesicle. The child's pulse was weak and slow, not exceeding 64. The extremities were cold; tongue dry and coated. There was stupor almost amounting to coma. There was extensive sloughing and hemorrhage from the mucous membrane of the mouth. The integuments of the cheeks adjoining the commissure of the lips were of a livid hue. The respiration was very much hurried, but no physical sign of disease could be detected in the chest. These formidable symptoms, I was informed by the child's parents, first presented themselves between the ninth and twelfth day from that on which it had been vaccinated. The practitioner who inoculated the child assured me that up to that period the vaccine vesicle ran a healthy course, and that he had vaccinated other children with the same lymph in whom the course of the vesicle was perfectly regular.

This child was of a delicate constitution, having been at times under my care for attacks of scrofulous ophthalmia, pneumonia, and bronchitis. Its health I understood was good at the time it was inoculated.

Complete recovery, though very slowly, was effected in this case by the following means:—The child's strength was supported by the exhibition of mild tonics and of the diffusible and permanent stimulants. The arm was kept constantly poulticed and fomented, until the sloughs separated, and was then dressed with simple dressings. Muriatic acid, slightly diluted, was occasionally applied around the sloughs of the mucous membrane of the mouth; and at times small doses of opium were given.

The second case was that of a male child, aged 18 months, who was also vaccinated by a physician of character in this city. About the twelfth day from the period on which it was vacci-

nated, the arm was attacked with severe inflammation of the erysipelatous character, the vaccine vesicle, as far as I could collect from the parents, having up to that day ran a regular course. I saw this child on the sixteenth day. A dark slough, as large as a shilling, then occupied the situation of the vesicle; the entire extremity was immensely swollen; the integuments of the upper arm were of erysipelatous redness, and such portions of them as were in the immediate neighbourhood of the slough were quite livid. The attending fever was of the inflammatory type; the skin being hot, tongue furred, pulse rapid and full, and the thirst great. Until the fever was subdued by cooling and alterative medicines, and the local inflammation relieved by the application of poultices and fomentations, the sloughing spread with the most alarming rapidity. After the sloughs had separated, the progress of the gangrene having been arrested by the foregoing treatment, a large and deep ulcer remained with undermined edges, at the bottom of which the muscles of the arm could be distinctly observed; so extensive was this ulcer, that it was not healed for three months, though the case progressed most favourably in every respect. The child, I was informed, was in good health at the time it was inoculated; and I saw other children who, I was told by their parents, were vaccinated by the same matter, in whom the vaccine vesicle ran a regular course. Dr. Francis Battersby, one of the physicians to Pitt-street Dispensary for Diseases of Children, saw both these cases with me. The second case was also seen by Dr. Dwyer, likewise one of the physicians of that Institution, and formerly assistant physician to the Lying-in Hospital, Britain-street.

It is obvious, if the accounts which I received were correct, that the unhealthy inflammation in the foregoing cases could not have been produced by the inoculation of impure matter, as other children were vaccinated with the same lymph without any deleterious consequences: the period also at which the in-



flammation supervened militates against such a supposition. Dr. Dwyer and Dr. Battersby, who, as I have just mentioned, saw the last of these two cases, concurred with me in the opinion that the very severe inflammation which attacked the arm must have arisen from some peculiarity in the child's constitution, or from some local irritation. The fever and symptoms which existed in the first case appear to have been very similar to those symptoms which attend one of the malignant forms of scarlatina described in Dr. Graves' work, styled secondary fever in my paper published in it, and aptly termed complicated malignant by Dr. Henry Kennedy. There could have been no complication in this case with scarlatina, as the child had been affected with that disease at a remote period from that in which it was vaccinated.

I have recorded these cases not with the slightest idea of creating any prejudice against vaccination, which has proved so eminently useful, but for the purpose of showing its analogy to the other exanthemata, and with a view of rendering practitioners cautious in the management of children whom they have vaccinated, until all inflammation has ceased. There is a fatal case of cow-pock given in Dr. Labatt's work, and I have been informed by a practitioner of great eminence in this city that he knew of a case which terminated in death, though the child was inoculated with pure matter.

I may appear to have dwelt too much on this subject; I should not however have done so, but that it seemed to me that these remarks, if they did not add to, they might at least, in some respects, confirm the knowledge already possessed of so important a class of complaints as the exanthemata, both with regard to their pathology and treatment. The following conclusion I think may be deduced from the foregoing cases and remarks.

That the unhealthy inflammations which occasionally occur during the course of the exanthemata are, in some instances, of a nature very similar to hospital gangrene.

That destructive ophthalmia may take place in scarlatina, and possibly in other exanthemata, besides variola.\*

That even in cow-pock, though very rarely, a malignant form may occur from some individual peculiarity.

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\* Dr. Mackenzie has quoted (Opus cit. p. 434) Mr. Marson's opinion, that the destructive inflammation of the eye which follows small-pox is entirely a secondary affection, and that it is analogous to the sloughing of the cellular membrane in other parts of the body, which is a frequent sequela of that disease.

## BIBLIOGRAPHIC NOTICES.

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### *Report of the Commissioners appointed to take the Census of Ireland for the Year 1841.*

ANY one ever so little acquainted with the obtaining of statistical returns, must be aware how very difficult it is to combine minuteness with accuracy. And also that the difficulty arises as much from the machinery as the subject. The late Rev. Cæsar Otway, in his travels through Erris, tells us that the mode adopted in a former census was to employ persons who were paid in proportion to the number of the population they made out! This will, probably, explain why the numbers given in the present census are so little above those obtained in the former, without the necessity of assuming extraordinary causes to account for a decreased population.

The present Commissioners—Mr. Tighe Hamilton, Mr. Brownrigg, and Captain Larcom—having the police at their disposal, arranged their plans with great care, and so as to avoid all ordinary sources of error, and the result is one of the most minute, ample, and satisfactory Reports we have ever met. In it we have very full details of the persons, houses, families, occupations, emigration (home and colonial), rural economy, such as division of lands, plantations and trees, farms and live stock, education and vital statistics, *i. e.* births, marriages, ages and deaths, as regards each county, and a general summary of the whole.

The Report upon the table of deaths has been intrusted to our distinguished *compatriote*, Surgeon Wilde, and we have no hesitation in saying that it does him infinite credit, both as to the mode adopted for obtaining accurate results, and the labour and extreme care bestowed. It is with this department that we shall occupy ourselves at present, as it has a more direct bearing upon the profession. But it may not be uninteresting to our readers—before we leave the general Report—if we lay before them the portion which describes the plan adopted on the present occasion:

“ Our first step was to procure from the Ordnance Survey Department a map of every barony in Ireland, showing the boundaries



and details of its several parishes and townlands, with classified lists of these subdivisions. As the survey had been completed, except in the counties of Cork, Kerry, and Limerick, we thus, for the first time, possessed the advantage of a set of maps which not only indicated correct boundaries, but exhibited every house upon the face of the country. For those three counties the maps were formed from less perfect documents, and exhibited, for the most part, no more than the boundaries.

“It having been resolved that the constabulary should be employed for the enumeration, we next distributed the maps and lists to the several officers and head constables of the force, selected by the inspector-general for each barony. They again divided these into districts of contiguous townlands, to each of which was assigned a superintending constable or sub-constable, or, in those districts where the constabulary were not sufficiently numerous, one of the coast-guard, or, where such assistance was not available, a civilian selected by the superintendent. We were thus enabled to mark on a general map the districts and stations of all the enumerators, and the whole force thus marshalled was in readiness before the arrival of the period fixed by the Act of Parliament for the enumeration.

“In the mean time, having maturely considered the best mode of ascertaining the various facts we had in view, we resolved to adopt the course of sending a form of return to each family, to be filled by its head, as less intrusive than requiring it to be filled by the enumerator from *viva voce* inquiry. But we, of course, took means to check the returns so obtained, and required from the enumerator a certificate that they were true to the best of his belief. Another form was supplied to the enumerator, in which he was himself required to record the various particulars sought, as to houses and matters of a similar nature. The general distinction we followed was, that the statement of all facts which were of a personal nature, and only ascertainable by personal *inquiry*, was, as far as possible, left to the head of the family, whilst that of all facts which could be ascertained by mere *observation* was demanded from the enumerator.

“The Act required us to ascertain the age, the sex, the occupation, and place of nativity of every person abiding in Ireland, on the night of Sunday, the 6th of June, with such other particulars as the Lord Lieutenant should direct. We accordingly made provision under the latter power for such inquiries as appeared likely to illustrate or verify the information specifically required. Thus, we asked the *name* of every individual, as a proof of identity; and the *relationship*, with a view to distinguish the members of the *natural* family from the servants and other members of the establishment, constituting what may be considered the *social* family. We also demanded a return of absent members, which, together with the measures adopted at the ports, to be described hereafter, we hoped would obviate the danger of error from the lateness of the season at which the census was to be taken. We also ascertained

the dates of marriages and of deaths since the last census, in order to institute a comparison of ages with the former returns, and, in the absence of registries, test in some degree the correctness of the enumeration.

“The Act also required a return of the houses, distinguishing those which were inhabited from those which were uninhabited, or building; and by a similar extension of the inquiries into subjects of a kindred nature, we sought to ensure a correct knowledge of their state in point of accommodation; whilst, from the combination of these several returns with those before mentioned, we hoped to throw some useful light upon the general condition of the community, as there can be no more obvious indication of the advances and condition of a people than improvement in the comfort of their residence. So, in an agricultural community, the quantity of land held or tilled by each occupant, not only throws light upon agriculture as a branch of national wealth and industry, but by its influence on the condition of the people, affords a test of the relative advantages of large and small farms. Again, the quantity of cattle and other stock of every description, is necessary to a just estimate of the productiveness of a country, and its influence upon the comfort of the inhabitants.”

For further details we must refer the reader to the Report, and we can honestly assure him that he will be amply repaid for the trouble of perusal.

Now let us turn to Mr. Wilde's Report, which is divided into five sections:—1. The mortality from disease and accident. 2. Coroner's inquests. 3. Insanity and lunatics in jails. 4. Hospitals and sanatory institutions. 5. A special sanatory report on the city of Dublin. We shall notice a few points here and there, leaving the fifth section for a future notice, premising that this is the first attempt at a bill of mortality for Ireland. Dr. Wilde observes:

“None of the ancient Irish works attempt to enumerate the diseases of this country, to catalogue their names, or describe their symptoms or fatality. The same deficiency in medical nosology is apparent in those of more modern times; and in no instance has any effort been made to draw up a general bill of mortality for this kingdom until the present. The only conception of this kind arose with Sir William Petty, who, in 1683, published a small tract of ‘*Observations upon the Dublin Bills of Mortality, MDCLXXXI., and the State of that City.*’ In the opening paragraph of this essay, he says, ‘The observations upon the London bills of mortality have been a new light to the world; and the like observation upon those of Dublin, may serve as snuffers to make the same candle burn clearer.’

“‘The London observations flowed from bills regularly kept for nearly one hundred years; but these are squeezed out of six straggling London bills, out of fifteen Dublin bills, and from a note of



the families and hearths in each parish of Dublin, which are all digested into the one table or sheet annexed, consisting of three parts, marked A. B. C., being the A. B. C. of public economy, and even of that policy which tends to peace and plenty.' These tables having a more local interest, will be referred to in the Report upon the mortality of the city of Dublin in particular."

"The precise period at which 'burials and births' were first recorded in Dublin has not been ascertained. They must have been in existence long prior to the date of Petty's tract (although they did not specify the cause of death); for in his Table B. he commences with the 'burials and births' of 1666. May they not have been introduced when Graunt's '*Natural and Political Observations upon Bills of Mortality*,' in 1661, first drew particular attention to the value of statistical inquiries of this nature in England? I find in the Appendix to his 5th edition of '*Observations on the London Bills of Mortality*,' published in 1676, a small imperfect Dublin bill given without any observations, and headed thus—'Dublin—A bill of mortality from the 7-6 of July to the end of August, 1662.' The registries in this document are—'flux, 7; rickets, 0; ague, 4; feaver, 0; consumption, 8; small-pox, 1; spotted feaver, 0; plague, 0; baptised, 14; died, 20.' This was in all probability one of the first attempts at a registration of deaths in this city.

"These bills were obtained from the parish clerks, but must have been very defective, from the circumstance of so many persons being buried in the grave yards in the *vicinity* of the city, and also from the fact of the births of dissenters not being registered. The exact period over which these bills extended cannot now be accurately determined; Dr. Thomas Short, in his work "*Observations on the City, Town, and Country Bills of Mortality*,' 1750, thus alludes to this tract of Petty's:—'Major Graunt having taken no notice of the Dublin bills of mortality, though the second city in his Majesty's dominions, an ingenious author in 1681 has published a small schedule on them, with three short tables.' This small bill for 1662 must have escaped the notice of Short, or he consulted only the early editions of Graunt's work. In 1686, Sir William Petty reprinted his original tract under the title of '*Further Observations upon the Dublin Bills; or Accounts of the Houses, Hearths, Baptisms, and Burials of the City*.' London, 8vo., 1686.—The only additional matter inserted in this edition is one small table for 1682, from which it appears that the houses were 6,025; fire-places, 25,369; baptisms, 912; and deaths, 2,259. In a few remarks upon this table, he concludes that the deaths of the metropolis were at that time 1 in 30—more according to an established rule for forming proportions of mortality then in use, than as the result of any actual calculation or observations of his own; were this proportion correct it would increase the ratio of deaths to the population, to 2,253 for that year. In 1684, Petty introduced the subject of these bills before the Royal Society—(see *Philosophical Transactions*). 'After this' (1648), says Short, 'I meet



with no other public account or notice of the Dublin bills till 1747, that the worthy Dr. Rutty there procured me an annual abstract of them from 1715 to 1746, only the births and burials of 1739 are wanting; because, before that year they ended their year with March 24, but since then with December 25. These want also the christenings of 1732, 37, and 38. Nor is it specified in these three years, the particular numbers that died above and under sixteen years of age, as is done in all the other years. Neither the old nor *new* Bills distinguish the sexes of baptized and buried, like other bills, nor have either of them the marriages, which is a great want.' One or two of the Irish medical writers about the same date briefly allude to them; but the most authentic record is that given by the accurate and observant Dr. Rutty (already cited by Short), in his '*Chronological History of the Weather and Seasons in 1770*,' and also his '*Natural History of Dublin*,' in 1772."

The population of the country, as ascertained by the returns, is 8,175,124, and the total deaths for the ten years ending June 6, 1841, amounts to 1,187,374, in the proportion of 100 males to 924 females.

The first object, of course, was to form a statistical nosology which would embrace all the diseases specified in the returns, and guard against errors arising from ignorance:

"In order to embrace as much variety as possible in the local terms for disease and death, I selected a town, and also a rural district, consisting of one or two remote parishes, in each of the four provinces, as well as a portion of the liberty, and some of the principal streets and squares of the city of Dublin, and recorded the names of all the diseases mentioned in these places. Many of these names being mere local definitions, were entered as synonymes to the term in most general use. By this means, I not only became acquainted with the most frequent causes of death among the different grades of the population, but also with the local and provincial terms used to express either the same or analogous diseases in different parts of the country. From this information I drew up a list of fifty-two diseases, consisting of the most frequent causes of death, and the names and symptoms of which are most generally known to the lower classes of this country, and arranged them, not according to their nosological grouping, but as far as possible with reference to the age at which they occurred, commencing with those of infancy and ending with those of senility, in order to facilitate their subsequent registration. Opposite the name of each disease, the various synonymes or popular and local terms, occasionally used to express the same or some very similar affection, were enumerated. Thus, for pemphigus gangrænosus, a disease common in many of the country parts of Ireland, the expressions 'black hives,—mortifying hives,—burned holes,—and black and white blisters,' were used. And again, dysentery and diarrhœa were constantly expressed by 'bowel complaints, lax, flux, purging, and bloody

flux, &c., the synonymes varying according to the rank, or character, or education of the person who filled the return, or according to the part of the country from which the information was derived. A previous acquaintance with the state of disease, particularly among the working classes in the remote districts of this kingdom, materially assisted me in arranging and applying the general application of the terms used to express disease; and I also communicated, when any difficulty arose, with several medical practitioners located in different parts of the country on this subject."

The nosological table thus constructed stands thus. First we have EPIDEMIC, ENDEMIC, and CONTAGIOUS DISEASES, including small-pox, measles, scarlatina, hooping cough, croup, thrush, pemphigus, diarrhoea, ague, cholera, influenza, fever, erysipelas, syphilis, hydrophobia, glanders. Then we have SPORADIC DISEASES, divided into *Diseases of the Nervous System*, including hydrocephalus, inflammation of the brain, apoplexy, injuries of the head, convulsions, paralysis, lockjaw, epilepsy, delirium tremens, insanity. *Diseases of the Respiratory and Circulating Systems*, including cynanche, inflammation of lungs, bronchitis, consumption, spitting of blood, asthma, vomiting of blood, diseases of the heart, water on the chest, aneurism, emphysema, empyema. *Diseases of the Digestive Systems*, including teething, jaundice, worms, colic, gastric fever, dropsy, diseases of the intestines, hernia, liver complaint, peritonitis, inflammation of the bowels, marasmus. *Diseases of the Urinary Organs*, including stone, stricture, extravasation of urine, urinary disease, diabetes, diseases of the bladder, diseases of the kidney. *Diseases of the Generative Organs*, including diseases of childbed, prolapsus uteri, ovarian dropsy, cancer uteri. *Diseases of the Locomotive Organs*, including rheumatism, diseases of the bones and joints, hip disease, spine disease. *Diseases of the Tegumentary System*, including ulceration, purpura, fistula, anthrax, lepra. *Diseases of uncertain seat*, including inflammation, phlebitis, mortification, wounds, hæmorrhage, malignant fungus, scrofula, gout, cancer, tumour, abscess, fracture, dislocation, debility, and old age. To these are added *Violent and Sudden Deaths*, including burns and scalds, drowning, intemperance, homicide, starvation, executed, poison accidental, suicide, accidental unspecified, and a column where the cause is not specified.

Under the circumstances, probably, no better classification could have been made out; it could not be expected that minute accuracy could be attained as to the special cause of death. Not the least interesting part of the table are the popular synonymes, especially the Irish ones. Can anything be more graphic than the terms "the eating disorder," for pemphigus gangræno-

sus ; “ half dead,” for hemiplegia ; “ shrinking of one’s self,” for phthisis ; “ splitting of the bones” for necrosis : and many others as good might be adduced.

But to proceed :

“ The next questions that presented themselves were, as to the period over which our inquiries should extend, and the primary division to be made of the work. The length of time that had elapsed since June, 1831, must necessarily have rendered the accuracy of the census returns of deaths, in the absence of all other official and authentic records, very defective as a *whole* ; and this defect would, as might be anticipated, become more apparent as we receded towards the earlier years. Except in the first and last periods the deaths were therefore registered in *single years* for the ten years over which our inquiries extended ; the first of these is therefore understood to include the half year and twenty-four days from the 6th of June to the end of December, 1831, and also the entire year 1832 ;—and in the last is only included the five months and six days from the 1st January to the 6th June, 1841.

“ Regarding the local division of the registration, it was thought more desirable, more in accordance with the other branches of the census, affording not only greater accuracy, but being also a more limited and definite space on which to test the correctness of our work, and if necessary to refer to for any more detailed object or local information, to register the different counties in parishes. And, as the laws of mortality are so much influenced by a crowded or scanty state of the population—by the quantity and quality of their food—geographical position—the condition of their dwellings—the prevalence of epidemics—the existence of trade and manufactures of different kinds, as well as the greater or less proportion of medical aid and general sanatory relief, both in large towns and in the open country ; the division into civic and rural districts became also necessary.

“ In order that each of the ordinary divisions of the country might present this difference, and that at the same time those places only which afforded a collection of inhabitants within such spaces as might influence their mortality, should be distinctly specified, it was arranged that the civic district of each county should consist of all the towns of or above 2,000 people ; and with one exception (that of Leitrim) each county in Ireland offered one or more examples of this description. Cities and towns of considerable magnitude (as Belfast) were registered separately, and not included in the civic district of the counties to which they belong ; but in all instances the original parochial division was retained. Towns situated on the borders of counties, and portions of which extended beyond the county boundary, have had each part included in the civic districts of their respective counties, provided the entire population of such towns amounted to 2,000. In this way a parochial registration of the kingdom was effected, as complete as the returns permitted, which amounted in all to 1,187,374 deaths. When new,



or particular diseases, or those not set forth among the fifty-two already mentioned, were met with in the parish registration, they were specified in the form of notes upon the registering books: the *particular* cause of death in the case of accidents comes under this head.

“ Thus a registration was compiled of the causes of every death given in the returns, the age at which it occurred, and the year in which it took place.

“ The hospitals and sanatory institutions having been also furnished with forms requiring a return of their deaths of a more detailed and medical nature, and being aware of the greater importance and accuracy of those returns when properly attended to, I undertook, with your permission, to collect from these establishments such other additional information connected with their medical statistics as their records could supply. The causes of death afforded by the hospital returns having been furnished either by the medical attendants or from the case books and registries of these institutions, being in their definition much more accurate, and in their numbers more extensive, I arranged separate tables of deaths for the collected hospitals of each county in the kingdom. This, added to the notes of particular affections in the parochial registry, increased the list of diseases and causes of deaths to ninety-three.

“ Owing to the length of time that had elapsed from the outbreak of cholera in 1832 and 1833—from the circumstance of so many poor and destitute persons, as well as whole families, having been swept off by that epidemic—from the universal panic that then prevailed, and the general medical and surgical hospitals having been closed against the admittance of persons labouring under Asiatic cholera, the return of deaths from this disease, either in the A. forms or in the hospital registries, was, as might have been anticipated, very defective. To remedy this omission, a return of the deaths from cholera, that occurred in 1832 and 1833, amounting to 25,378, was procured from the office of the Board of Health, and the numbers specified therein, distributed among the deaths of the different localities where they occurred.

“ A record of the deaths, as well as the executions that took place in the different gaols in Ireland, was also received and registered.

“ A return was received of the number and the date and cause of death of the different coroners' inquests in each county and city in the kingdom for the ten years included in the census inquiry. These documents having been statistically arranged, those violent or sudden deaths which they specified, and which *were not enumerated in the returns*, were added to the general mortality of their respective counties, for the years in which they occurred.

“ Finally, the number of deaths that occurred in each of the public and private lunatic asylums, together with such other topics of information as the records of these establishments afforded, was registered, and the deaths added to their respective districts.

“ Thus while the hospital returns afforded more accurate infor-

mation in a nosological point of view than the return of deaths in the A. forms, the inquests and gaol returns filled up those blanks in the general table of mortality, which it would have been impossible to have derived from either.

“By registering all the information derived from these sources upon properly arranged tables, we had acquired a knowledge of the age, sex, date, locality, and disease of one million, one hundred and eighty-seven thousand, three hundred and seventy-four deaths.

“The parish registries being too voluminous to print in detail, were next arranged in baronies; separating the towns of 2000 inhabitants;—and in these baronial returns the ages which had been originally registered in single years, were, with the exception of the first year, which was retained in months, and the following four in single years, compressed into quinquennial periods. Thus, the baronies of each county, including all the villages and minor towns whose population did not amount to 2000 inhabitants, were added together to form the *Rural District*; and the towns of or above that number of inhabitants, were added to form a *Civic District*; while the hospitals and asylums of each county were added, under the title of *Hospitals and Sanatory Institutions*, and a *General Summary* made of the whole.”

After thus classifying the causes of death, and arranging these multifold tables, which reflect great credit upon Mr. Wilde's ingenuity and accuracy, he proceeds to notice the diseases in detail, furnishing us not only with the statistical proportion, but with much antiquarian information as to the prevalence, from early times, of peculiar diseases or epidemics. As a specimen we will quote the section on fever:

“FEVER—The plague of Ireland, and from the earliest period to which history refers, the most prevalent and fatal affection to which this country has been subject. The *Maculated* or *Spotted* Fever, the true *Typhus Hibernicus*, is recorded in the early Irish MSS. under the term of *Fiabhrus Morgaighthe*, or the Putrid Fever; and also *Fiabhrus righin*, the Lingerer or low nervous Fever. Although the former of these words is well known to all Irish scholars, yet it is seldom used by the people, who express “*the fever*” or “*the sickness*,” as it is sometimes called, by the general term *Fiabhrus*. “It is probable,” write Doctors Barker and Cheyne, that “continued Fever existed in this island long before the era of authentic medical records. Were we to hazard a conjecture respecting the plagues, as they were called, which accompanied the two great civil wars in Ireland—that in Queen Elizabeth's time, and that which commenced in 1641—it would be that those, strictly speaking, were not plagues, but epidemic Fevers, such as have lately prevailed.”

“Gerald Boate, the first English writer who described these Fevers under “The Diseases reigning in Ireland, and whereunto that country is particularly subject,” states that, “As Ireland is sub-



ject to most diseases in common with other countries, so there are some whereunto it is peculiarly obnoxious, being at all times so rife there that they may justly be reputed for Ireland's *endemii morbi*, or reigning diseases, as indeed they are generally reputed for such. Of this number is a certain sort of malignant feavers, vulgarly in Ireland called *Irish agues*, because at all times they are so common in Ireland, as well among the inhabitants and the natives, as among those who are newly come thither from other countries." He likewise notices its epidemic nature, prevailing "in some years with so great violence, that notwithstanding all good helps, some are thereby carried to their graves; and others who come off with their lives through robustness of nature or hidden causes, are forced to keep their beds a long time from extreme weakness, being a great while before they can recover their perfect health and strength." All authorities at present agree in regarding the "Irish Agues" of Boate as the true Synochial and Typhus Fevers of this country, and not of an intermittent character. Doctor Short states, that "In 1682 there raged a Spotted Fever in Dublin; in that year died 2,262, a very high bill." "In the year 1688, in the middle of May, a Fever began at London which spread over all England; and likewise over all Ireland, in July. Not one of fifteen escaped, yet not one of a thousand died; and it was observed, both in England and Ireland, some time before the Fever began, that a slight but universal disease seized the horses—viz., a great deflection of rheum from their noses."—(*Rutty*). This was a modification of the sweating sickness (*Sudor Anglicus*). And from the early part of the 18th century till towards its close, we have the fullest and most satisfactory records of the epidemic Fevers of this country transmitted to us in the works of O'Connell, Rogers, and Rutty, the medical historians of Ireland, to which I have already referred, and which, say the eminent authorities from whom I have just quoted (Doctors Barker and Cheyne), "possess a permanent interest, and excite a feeling of regret, that the physicians who succeeded those eminent men, by failing to imitate so laudable an example, should have left a blank in the medical history of their country which it is no longer possible to supply."

"It is probable that it has always been endemic; but the first defined period of epidemic Fever in Ireland is that chronicled by Rogers in Cork and its vicinity in 1708, and again in 1718-21, and 1728 to 31; and by O'Connell from 1740 to 1743. But as the annals of disease left us by these authors are more or less local, it may be well to mention, that "when Typhus begins to increase notably in the Dublin hospitals, we may rest assured that a nearly simultaneous increase of Fever will be observed in Cork, Galway, Limerick, and Belfast." (*Graves*.) "After the year 1721 there was again an interval of good health in Ireland, so complete that scarcely a case of Fever was to be met with." The most fearful epidemic of the last century, that in 1740 and 1741, is recorded by Rutty and O'Connell. We have certain accounts of this Fever being general throughout the provinces; and "in Galway," says Webster, "in 1840 it fell little short of the plague." Rutty says, that "in those



years it was computed, though probably with exaggeration, that "one-fifth of the inhabitants died of Fever." O'Connell stated the number to be about 80,000; and again, in more modern times, it has been asserted in the Select Committee of the House of Commons (in 1830), that 65,000 died of Fever in 1817. How much reliance can be placed on rough guesses of this description may be gleaned from the statistics of mortality now recorded, which, whatever may be their intrinsic value, have certainly been obtained from sources such as were not, and could not have been had recourse to by the persons who offered these conjectures—the whole amount of Fever in Ireland for ten years, both in and out of hospital, not being much above 112,000; and cholera in its three years' progress, carried off little more than 45,000.

"Rutty notices an epidemic Fever in Dublin in 1745, from whence, to 1763 and 1764, the country appears to have been tolerably free from this malady. Sims mentions a violent epidemic Typhus in 1771, and Cheyne another from 1797 to 1803, founded upon "the monthly returns and reports made to Government by the Army Medical Board of Ireland, the proceedings of the Governors of the House of Industry, and the records of the Fever Hospital at Waterford." During the latter part of the last century, the health of the army was considered a good test of the health of the community generally; the soldiery being then principally located in billets or temporary barracks, were consequently liable to all the infectious diseases of the lower orders. A slight increase in Fever took place in 1810, and again in 1815, but it did not proceed to any great extent till the memorable years 1817, 1818, and 1819, when, say Doctors Barker and Cheyne, "assuming the population of Ireland to amount to six millions, it will be no exaggeration to state, that a million and a half of persons suffered from an attack of Fever in the time included between the commencement of the years 1818 and 1819. In the course of two years commencing with September, 1817, more than 42,000 patients were admitted into the hospitals." This scourge spared neither rank, circumstance, nor locality—town or country. The total number of patients admitted into the hospitals of Ireland (both temporary and permanent), during the prevalence of that epidemic, was 100,737, of whom 4,349 died. These authorities likewise mention the greater prevalence and fatality of Fever among males than females; this supposition, formed upon the returns of the Dublin hospitals, in the epidemic of 1817–19, is confirmed by the Census returns of 1841—the sexes being 60,206 males, and 51,866 females; and this proportion holds equally good, in both the districts, and in the hospitals and sanatory institutions. We have no account of any pestilential Fever or other formidable epidemic occurring in Ireland, until the arrival of cholera in 1832–3.

"The total deaths from Fever in Ireland, during the ten years included between June, 1831, and June, 1841, afforded by the Census returns, amount to 112,072—in the proportion of 100 males to 86.14 females, being 1 death in 10.59 of the mortality from all causes, and 1 in 3.4 of the deaths of the total epidemic class of diseases.

“ Compared with the general mortality, Fever has prevailed most in the counties of Cavan, Mayo, Galway, and Clare, and the towns of Belfast, Kilkenny, Dublin, Limerick, and Carrickfergus. During the ten years comprised in this Report, an epidemic Fever of a very malignant nature again visited this kingdom and the metropolis in particular, as an accompaniment to the influenza of 1836-7. During the latter year the deaths afforded by the Census returns amount to 17,280 : in the two following years the mortality fell considerably, but rose again in the year 1840, when 17,965 died. This increase, however, independent of any epidemic outbreak at that period, may be accounted for by the increased number of Fever hospitals established of late years in Ireland ;—thus in 1840, we find the deaths in hospitals to amount to 2,663, being double what they were in the early part of the period over which our present inquiry extends—(See Fever Hospital Statistics, pages 198 and 199). Cases of Typhoid Pneumonia have no doubt been included in these returns ; thus, says Dr. Wm. Stokes : “ This disease, so frequent in Dublin, at times indeed almost epidemic, has been long noticed under the names of the putrid, bilious, typhoid, or erysipelatous pneumonia.” Fever has spared no age, from 1 month to 90 years and upwards, but its most fatal period has been from 15 to 50.

“ The causes of epidemic Fever, and other epidemic or contagious diseases, do not come within the province of this memoir ; but it must strike the medical historian and statistician as remarkable, that when the Irish records of this class of affections are accurately examined, it will be found, that notwithstanding all that has been written and asserted upon the subject of atmospheric influence, want and distress, &c., conducing to the propagation and spread of disease, Fever in particular has raged nearly decennially for the last one hundred and fifty years. I do not mean to say, that it has become epidemic or fatal exactly upon the tenth year ; but from the eighth to the twelfth, with an interval of from six to eight years ; thus it appeared in 1708 ; 1718-21 ; 1728-31 ; 1740-43 ; 1763-64 ; 1771-73 ; and 1817-21. In the years 1832-33 Cholera took its place, but in 1837 it again appeared ; and the year 1842 has been marked by a most fatal epizotic. Why those lapses of twenty years, or whether our records are deficient for those periods, cannot now be determined : this periodic invasion is nevertheless curious though unaccountable : “ The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh and whither it goeth.”

As every one would expect, the proportion of deaths to the population is much greater in the large towns than in the open country or small towns, being as 1 to 36.33 in the former, and as 1 to 59.89 in the latter.

The Report on coroner's inquests has been so largely noticed by the newspapers and periodicals, that we shall merely point out as curious, the periods of the year at which suicide, murder, and infanticide prevail, and refer the reader to the novel and interesting tables, p. 184.

The section on insanity is very valuable, and highly creditable to the industry and care of Mr. Wilde. He has given us, in a tabular form, the professions and occupations, the ages, sexes, marriage, education, &c. of these (p. 200), which must have cost an enormous amount of labour. To the credit of the proprietors of private lunatic asylums, we must notice that, with the exception of names, all the queries were promptly and fully answered.

On the other hand, to the disgrace of the country, it must be stated that a number of pauper lunatics and idiots are confined in the jails, the lunatic asylums being full. Of the 1800 thus committed during ten years, 96 died, 66 males and 30 females.

One would have anticipated more accuracy and satisfaction from the records of hospitals than from any other section—here at least, we ought to have accurate data, with entries of dates, ages, occupations, deaths, cures, &c., on which a minute and valuable Report might be founded. We really quote, with a feeling of shame, the following paragraphs:

“It is much to be regretted that in 6,049 instances, 3,216 males and 2,833 females, the records of the two classes of institutions under consideration, were unable to afford a return of the cause of death, or that nearly one in every three cases occurring in these public hospitals should be marked ‘Not Known,’ or ‘Cannot Tell;’ yet, manifest as is this deficiency in the public medical records of disease, it is one which, in many instances, was no doubt unavoidable, particularly in the country parts, where *post mortem* examinations (often the only means of acquiring a knowledge of the true cause of death) are so objectionable to the people. But when the records of the hospitals at large are unable to specify the *age* at which death took place in 8,764 instances, 5,191 males and 3,573 females, or about 1 in every 5, the benefit of some general system of hospital registration forces itself upon our attention. The total deaths in infirmaries and general hospitals during the ten years was 19,039, as 100 males to 69.67 females.

“The great majority of these hospitals have afforded a return of their receptions and deaths for the entire period, the ten years ending the 6th June, 1841, but several could not afford it for half the time; some kept no record of the distinction of sexes, and some were opened only lately.”

Surely men who enjoy the advantages of hospitals, ought at least to afford to the profession an accurate statistical record of their experience:

“The total amount of deaths in 86 fever hospitals, from which returns were received for the entire, or portions of the ten years, ending 6th June, 1841, is 15,988, as 100 males to 94.5 females;



but from the defective state of hospital registries in Ireland, this falls far short of the actual number of deaths for the period over which our inquiries extend. The entire number of deaths from the epidemic class of diseases was 15,339, *i. e.*, 7,849 males and 7,490 females, of which number 14,501 were deaths from typhus, or other forms of epidemic fever, 7,465 males and 7,036 females. The other deaths from epidemic diseases were, by small-pox, 49; scarlatina, 23; croup, 1; diarrhœa, 34; cholera, 716; influenza, 1; erysipelas, 13; and glanders, 1. 68 died of sporadic diseases of the nervous system, 42 males and 26 females; 145 from diseases of the respiratory and circulating organs, 77 males, and 68 females; 63 from diseases of the digestive organs, 40 males and 23 females. 4 males died of diseases of the urinary organs, and 6 females from those of the generative organs, 5 of which were the result of child-bed. 6 persons died from affections of the locomotive organs; 7 from diseases of the tegumentary system, and 30 died by the diseases of uncertain seat, 19 males and 11 females. 12 violent or sudden deaths have been returned by the fever hospitals; and in 308 instances, 172 males and 136 females, the cause of death was not specified. It is, however, but just to remark, that 287 of these deaths, where the cause of death was not returned, occurred in one hospital, that of New Ross, in the county of Wexford. It may, however, be fairly presumed, from the nature of the hospital, that these were also cases of fever."

As to the hospitals of jails, much the same unsatisfactory result obtains; however we find a certain amount of information given:

"The epidemic diseases, the most numerous of the entire, proved fatal to 213 persons, 162 males and 51 females; of these fever carried off 113 males and 29 females. Diseases of the nervous system destroyed 82; *i. e.*, 58 males and 24 females; of this class of affections, deaths from apoplexy were the most numerous, as might be anticipated from the great change of life, habits, and pursuits of persons on becoming confined in prison; it proved fatal in 22 instances, 14 males and 8 females. 26 persons, 19 males and 7 females, died of insanity, and 14 of epilepsy, 10 males and 4 females. Diseases of the respiratory and circulating organs, the second most fatal class of affections in jails, destroyed 147 persons, 110 males and 37 females; of these, consumption caused death in 98 cases, 70 males and 28 females. Diseases of the digestive organs carried off 44 persons, 32 males and 12 females; of the urinary organs, 6 males; of the generative organs, 5 females; of the locomotive organs, 4 males and 1 female; and of ulceration, the only specified cause of death among the diseases of the tegumentary system, 2 males and 2 females. Diseases of uncertain seat proved fatal to 71, *i. e.*, 58 males and 13 females, of which number 43 males and 9 females are reputed to have died of debility or old age. The violent or sudden deaths amount to only 14, *i. e.*, 10 males and 4 females;

and the deaths where the causes were not specified to 72, *i. e.*, 46 males and 26 females."

We have thus given a slight sketch of this very valuable Report; to have done justice to its merits and to have fully laid before our readers the enormous mass of information it contains would require a volume. It is creditable to the government to have furnished the means, and to the commissioners who have superintended its execution; and our readers, we are sure, will echo our opinion, when we pronounce the Report we have brought under their notice most creditable to the ingenuity, patient industry, and talent of Surgeon Wilde. In conclusion we shall quote the last paragraph, and beg of our readers to consult the work for themselves:

"In conclusion, gentlemen, I have but to remark, that in arranging the following tables of deaths, and in drawing up the foregoing Report, I have endeavoured to place in the clearest light, and to display in the most concise and succinct manner, the amount of information contained in the documents which you submitted to my inspection. And although I have ventured an opinion on the importance and the character of each class of our materials, I have cautiously abstained from drawing conclusions from premises which may, perchance, be false;—nor ventured on calculations unless for the purpose of *local comparisons*, as in the tables of mortality, which, though they do not express the actual amount of mortality, or the actual average duration of life in Ireland, yet serve by comparisons to exhibit the relative healthiness or unhealthiness of particular places, or among particular classes, or of deaths caused by particular kinds of disease; and having in every instance stated the premises, and in many cases given the actual numbers on which such calculations were formed, I have, I trust, stripped them of an assumption of authenticity which they in no wise deserve as a whole. There is, however, independent of all calculations and deductions, a vast collection of statistical facts put together in this portion of the census, of which, no doubt, the statistician and political economist will take advantage. The records and tabularly arranged statistics of the public medical hospitals and sanatory institutions—coroners' inquests—lunatic asylums—jails, &c., are in themselves of sufficient importance to lend character to this portion of our labours; and until some better and more accurate registration of the deaths of Ireland is effected, that which I now beg leave to submit to you may be referred to."

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*Descriptive Catalogue of the Anatomical and Pathological Museum of the School of Medicine, Park-street.* By JOHN HOUSTON, M. D., &c.

THOUGH a catalogue does not, strictly speaking, come within the range of our Journal, we are, in the present instance, induced



by the intrinsic merit of this publication, to depart from our usual course. The museum of the Park-street School is well known as one of the most valuable in this city. In the department of pathology it is particularly rich, as it contains the most valuable specimens of morbid anatomy which have for some years been met with in Stevens', the Meath, Sir P. Dun's, and the Fever Hospitals, in the practice of Mr. Cusack, Mr. Wilmot, Mr. Porter, Sir H. Marsh, Dr. Graves, Dr. Stokes, and many other distinguished members of the profession. In the preface we are told that "for the student it was written, and to him it is addressed;" but the practitioner will also find in it much valuable information and food for deep and profitable reflection.

We cannot conclude without expressing our admiration of the manner in which this little work has been laid before the public by Dr. Houston, assisted by the talented and zealous Curator of the museum, Dr. J. Hill.

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*On the principal Diseases of Females.* By FLEETWOOD CHURCHILL, M. D. Second Edition, with Engravings.

As the first edition of Dr. Churchill's useful work has been already reviewed in this Journal, we have only to inform our readers that the present edition is published in a very convenient form, duodecimo size, that it is illustrated by some excellent wood-cuts by Bagg, from drawings by a talented artist of this city, Mr. Nielan, and that the introductory remarks on the pathology, diagnosis, and treatment of the diseases of the uterus have been remodelled and contain much valuable new matter, particularly on the subject of the different modes of examination of the uterus, and the various forms of speculum in use. Like Dr. Churchill's other works it is remarkable for a clear, terse style, and vast erudition; the notes, and references, and enumeration of the authors who have written on the particular subject treated of, are of great value, and give a complete resumé of the medical literature of all the diseases of females. Dr. Churchill's merits have not been appreciated in this country alone, a second edition has been published in America, nor will it stop here, we are sure, as for a clear, compact, and satisfactory description of the diseases of females we know no work to compare to Dr. Churchill's.



*Natural History, Pathology, and Treatment of the Epidemic Fever at present prevailing in Edinburgh and other Towns.* By JOHN ROSE CORMACK, M. D., &c. &c.

WE regret extremely that our limits will not permit us to lay an analysis of this valuable work before our readers in this Number, but we hope to be able to do so in our next. The fever at present prevailing in some towns of Scotland differs materially from the usual type, and presents many points of resemblance to that observed in the epidemic which appeared in Dublin in 1827, described by Drs. Graves and Stokes. These eminent Physicians have given the details of several cases presenting features exactly like the yellow fever of tropical climates, and it is strange that in the epidemic now described by Dr. Cormack, several cases of yellow fever have occurred, presenting not only the symptoms, but the same pathological appearances as were noticed in the Dublin fever. In our next Number we shall enter more fully into these particulars. Dr. Cormack has performed his task in a manner highly creditable to him; the cases are recorded most accurately and minutely, and the deductions drawn from them are rigid and conclusive. We could not pronounce a higher encomium on this record of a very remarkable epidemic, than to say, that it deserves a place beside CHEYNE and BARKER's "*Report of the Epidemic Fever in Ireland*," a distinction to which it is well entitled.

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*Elements of Natural Philosophy.* By GOLDING BIRD, M. D.

THE fact that a work of this kind was required for the student of medicine seems evident from the circumstance that a second edition has been called for within a short time from its first appearance. It is unnecessary to point out the utility of such an undertaking, for there is hardly a department of medicine or surgery which does not require a previous knowledge of the general laws of physics before it can be properly studied. Hitherto this knowledge has been acquired from different sources, as most works are so encumbered with technicalities, and are so elaborate, as to repel rather than invite the student, and consequently, few of those readers, for whose benefit the present work has been undertaken, have had an opportunity of acquiring any thing like a useful knowledge of physics. This deficiency has hitherto been supplied, to a certain degree, by the lecturers on the different branches of medicine, as for instance, acoustics is usually spoken of preliminary to a course of lectures on diseases of the chest; optics is touched on by the lecturer either on the

pathology or the physiology of the organ of vision ; hydrostatics by him who teaches the laws which regulate the circulation ; electricity, magnetism, polarization of light, and thermomics, by the teacher of chemistry ; and some of the principles of mechanics must be explained by the lecturer on surgery. Seeing then, that an acquaintance with the science is absolutely indispensable, we feel pleasure in giving a favourable opinion of the above Treatise to our readers. We do so the more cordially, as we know Dr. Bird to be both a scientific and an excellent practical physician, and we therefore recommend his treatise as being not only one of the best on the subject, but as the only one adapted for the student and practitioner of medicine. The paper, type, wood-cuts, and “getting up” of the work, are entitled to the highest praise, and the style and arrangement are both lucid and concise.

# SCIENTIFIC INTELLIGENCE.

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## PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.

SESSION 1841-1842.

*Seventeenth Meeting, 19th of March, 1842.*

PROFESSOR GREENE in the Chair.

1. *Chronic Laryngitis; obstruction of the Rima Glottidis.*— Doctor Corrigan said he had received a preparation from his friend Dr. Scott of Kilkenny, which he considered of sufficient importance to lay before the Society. It was a specimen of laryngitis of the form denominated *subglottal* by Cruveilhier. There was no disease of the cartilages nor of the lungs. The patient was a woman *æt.* 40, and of spare habit, who had been suffering from chronic laryngitis for seven or eight weeks, during which various remedial means were tried without benefit, when she applied for Dr. Scott's advice. At this time she was very weak, her respirations hurried, about thirty in the minute, and accompanied by a loud crowing sound similar to that of croup. The pulse was 120, quick and feeble. Nothing remarkable could be discerned in the throat, and pressure on the larynx caused no pain. There was no dulness in any part of the chest, nor any stethoscopic phenomena, except occasionally some slight mucous and sonorous râles. The croupy sound of the inspirations was heard louder and more distinct when the stethoscope was applied to the larynx. The patient died on the next morning. When the body was examined it was found that the rima glottidis was almost completely closed by two white, firm, mammillary bodies, situated immediately above the arytenoid cartilages; a small blowpipe could barely be passed between them. It was evident that but little air could have passed through the glottis in this obstructed condition. The epiglottis was healthy; the mucous membrane of the larynx and trachea was red, and the larynx itself diminished in capacity. The trachea and bronchi, even to their minutest ramifications, contained a frothy mucus. The lungs appeared congested. Within the cranium the pia mater was very vascular, and the surface of the brain congested. Dr. Corrigan observed, that in this case the disease had probably commenced as the *œdema glottidis* of Bayle, and that the swollen part had afterwards become solidified. This change in the part appeared to have taken place at the end of seven weeks from the commencement of the



disease. It was remarkable that there was no ulceration. The white bodies obstructing the rima glottidis were, as the society would perceive, very dense, and resembled fibro-cartilage. When laryngitis occurred in the adult, the glottis is usually engaged and the effusion is submucous; in the child, on the contrary, the effusion is on the mucous surface.

2. *Prostate enlarged and inflamed.—Middle Lobe obstructing Urethra.—Bladder inflamed and perforated by Abscess opening into Peritoneum.—Peritonitis.*—Mr. Smith said he had to communicate to the Society a preparation, which, like the preceding, had been received from Dr. Scott, and on which he would make some observations. The preparation exhibited disease of the bladder and enlarged middle lobe of the prostate gland. The subject of the case was a man 72 years of age, who had suffered for a considerable time from prostatic disease. When his body was examined after death, the bladder was found adhering anteriorly to the abdominal parietes, and there was in this situation diffused pus among the deep muscles. When the adhesions were broken down, a perforation of about an inch in diameter was discovered in the bladder, which was in a sloughy state round the aperture. The parietes of the bladder itself were enormously thickened; interiorly it appeared corrugated and of a greenish colour, with some red patches here and there. In the upper and posterior part the mucous membrane had sloughed, and there was an abscess containing pus opening into the peritoneal cavity. Round this opening the intestines were adherent to the bladder and to each other, and the peritoneum in a state of inflammation throughout. The ureters appeared healthy; in the kidneys were several small abscesses. The prostate gland was greatly enlarged; the right and left lobes were each of the size of a hen's egg, and the third lobe of that of a walnut; their surface was of a bright red colour, which was most obvious on the middle lobe. It projected forward into the bladder, obstructing the orifice of the urethra. In this case the middle lobe had been perforated by the catheter.

Mr. Smith having pointed out these particulars in the preparation, observed that the progress of the abscess was probably this; first a hernia of the mucous membrane of the bladder through the muscular coat, caused by the violent efforts made in passing water; and then inflammation and suppuration within the protruded part, bursting at last into the peritoneum. There was another subject he might mention in connexion with this case. The perforation of the third lobe of the prostate had been recommended by some surgeons, and there were some cases certainly where it had been perfectly and permanently successful, of which Sir Benjamin Brodie had given an instance; but on the other hand it had often proved fatal both when performed designedly as an operation, and when it had accidentally occurred by unskilfulness in the use of instruments. Mr. Smith considered that in almost every case of obstruction from enlarged middle lobe, the catheter might by proper attention be introduced. In the preparation

then on the table, there was an immense third lobe, yet the urethra was not so obstructed but that a catheter could be passed by raising its point, as Hey recommended. Mr. Smith was of opinion that puncturing the bladder would be preferable to perforating the prostate.

3. *Rima Glottidis closed by warty Vegetations from its Margin.*—Doctor Stokes said the case from which he had the recent specimens, which he then laid before the Society, was one of great interest as connected with the performance of the operation of Tracheotomy, and the circumstances which would indicate it to be necessary. It was a case presenting the unusual circumstance of a fatal chronic disease of the larynx, without disease of the lung and without the usual symptoms of mechanical obstruction to the respiration. The subject of the case was a house-painter, æt. 34, admitted into the Meath Hospital on the 10th inst. This man had colica pictonum thirteen times, and his upper extremities had been paralysed three times. His voice had gradually become very weak, and about eight months ago he became troubled with a cough and expectoration of a viscid mucus, but had neither hæmoptysis nor pain in the chest. At the time of his admission he was extremely emaciated, his countenance pale, lips blue, mouth, teeth and tongue covered with sordes. His aspect was altogether that of a person suffering from profound disease, and whose constitution had completely given way. There was difficulty of breathing. On looking into the throat nothing could be perceived but general relaxation. The uvula appeared enlarged, but there was neither ulceration nor cicatrix in the throat. The epiglottis felt healthy and was not enlarged. There was no dysphagia and no tumour in the neck. The respiration was sometimes difficult, sometimes easy and tranquil; there was never orthopnoea. There was occasionally stridor, but it was very slight, and only occurred when the patient was excited. The voice was very weak. The respiratory murmur was almost inaudible, sometimes some slight bronchial râles would be heard in the chest, sometimes a very slight degree of dulness might be perceived. The impulse of the heart was well defined, and the sounds normal. When the respiration was suspended by voluntary effort, the first sound of the heart became inaudible. To form a diagnosis in this case, it would have been necessary to determine whether the stridulous breathing was caused by a disease of the larynx, alone, or complicated with tubercle of the lung; or whether it might not be produced by the pressure of a tumour either malignant or aneurismal. It was ascertained not to be caused by pressure; but it was not so easy to determine whether the lungs were engaged or not. The vocal phenomena were in fact useless in this case, and no useful result could be had from the physical examination of the chest.

The difficulty of breathing increased, but there were no violent paroxysms of it. The stridor would perhaps accompany three or four inspirations and then intermit. At night there was some slight aberration of mind, but when roused he was perfectly intelligent. He had been despaired of from the time of his admission, and died in



about a week afterwards. After death, the body was examined. It was then found that the glottis was completely obstructed by a growth of warty vegetations round the lips of the orifice, which was so perfectly closed that water would not pass through into the larynx when poured upon it. The disease was singularly localised. The epiglottis was quite healthy. The trachea was free from disease. The lungs were free from tubercle, and presented only a slight degree of sanguineous congestion in the lower lobes. There was a frothy mucus in the bronchi. There was no appearance of ulceration below the obstruction. The ventricles of the larynx were a little contracted, and the thyroid cartilage in a state of ossification. There had been a case some time ago in the Richmond Hospital, the symptoms of which were great dyspnœa occurring in paroxysms, with stridulous breathing and raucous voice. In that case the obstruction of the larynx depended on the growth of excrescences about the glottis; it was connected with syphilis and was relieved by tracheotomy. In the present case there had never been any syphilitic affection. (*Museum, Richmond Hospital.*)

*Eighteenth Meeting, 2nd of March, 1842.*

Mr. O'FERRALL in the Chair.

1. *Erosion of the Bodies of the Lumbar Vertebrae.*— Doctor Kirkpatrick presented a specimen of disease of the lumbar vertebrae and anterior surface of the sacrum, taken from the body of a man who had suffered for a considerable length of time from psoas abscess. Denis Sweeny, the subject of the case, came under Dr. K.'s notice in the Hospital of the North Union Workhouse. His age was about 28 years, he was by trade a comb maker, and when he came under Dr. K.'s notice was lame, greatly emaciated, and of a broken down constitution. The account of his case, as well as it could be traced, was, that about sixteen months ago he had been attacked with pain in the back and in the right hip, for which having applied at the hospital for relief, he was cupped both before and behind the great trochanter of the affected side, and internally used hydriodate of potass. By these means he was so much relieved that in a fortnight he left the hospital and returned to his employment. At the end of about three months a tumour was perceived in the groin, after which he was frequently in hospital, and for several months was alternately at work, and in hospital as a patient. At last the abscess opened, and he returned to the Workhouse Hospital. On his admission he was found to have a fistulous opening at the upper and inner part of the right thigh, about three or four inches below Poupart's ligament; this opening communicated with the cavity of the abscess. There was no symptom of spinal disease, nor did he complain of pain in the back from his admission to his death. When the body was examined it was discovered that there were two psoas abscesses, and there was also a chain of small abscesses along the concavity of the sacrum. The bodies of the last two lumbar vertebrae were eroded, but the intervertebral substance remained unaffected. There was no curvature of the spine.



2. *Intus-susception*.—Mr. O'Ferrall produced the recent specimens in this case, which he mentioned had been communicated to him by Mr. O Keeffe. The patient was a woman aged 42, whose abdomen had gradually become very much enlarged, in consequence of which and the absence of the catamenia she imagined herself to be pregnant. However the swelling of the abdomen continued after the catamenia had re-appeared, and on examination a solid, firm tumour could be distinguished in the region of the transverse colon. The bowels were costive and at last became obstinately constipated for seven or eight days, ileus and peritonitis with the usual symptoms supervened, and in this condition death took place. When the body was examined the usual results of peritoneal inflammation were found, and the tumour which had been felt in the abdomen was found to be caused by an intus-susception of the great intestines. The cœcum, a portion of the ileum, and part of the colon were included in the transverse colon; part of the invaginated portion was sloughy, and, what was very remarkable, the sigmoid flexure was enlarged in calibre, below the obstruction, contrary to what usually occurs. This perhaps might have depended on the assiduous employment of enemata to relieve the patient during the last few days of life.

3. *Enlargement of the Heart*.—*Thickening of the mitral Valves*.—Dr. Bigger presented the recent specimens in this case, the subject of which had been a soldier. His last illness commenced about two months ago, when he was perceived to be affected with a disease of the heart. The pulsation of the heart could be felt over a considerable portion of the left side; its action was irregular; the impulse less than natural; the pulse at the wrist was not synchronous with the action of the heart. Near the left mamma was a distinct bruit de scie audible over a well defined circumscribed space; the double sound was very distinct opposite to the auriculo-ventricular opening. This patient was mercurialized and treated with digitalis and other remedies. However dropsy came on, which for some time was alternately increasing and diminishing. He had then an attack of cholera, and for four days passed no urine. He complained greatly of want of rest and of difficulty of breathing. There was now œdema of the lung with a subcrepitant râle. After being two months in this state he died very suddenly, having got up out of bed for a few minutes and having just strength enough to return into it before he expired. When the thorax was laid open the lungs were found with the usual appearance of œdema; in the lower lobe of the left lung were several spots of pulmonary apoplexy. The heart was of very large dimensions, being nearly as large as that of a heifer. The mitral valves were a little thickened, but presented no remarkable morbid change: nor did the aortic valves, these were still capable of closing the aperture. The pouches external to the valves were very large. From the examination of the parts very little light was thrown on the symptoms, which it is extremely difficult to account for; there was very slight capability of regurgitation. In the abdominal viscera there was nothing remarkable.

4. *Fatty Degeneration of the Liver.—Phthisis.*—Dr. Stokes said the specimen he had to communicate was a very well marked example of the fatty degeneration of the liver, a very remarkable condition of that organ, and in the present state of our knowledge incurable. The complications of coexistent diseases are of great importance, and in no disease is this more observable than in phthisis. Dr. Montgomery has already directed attention to the atrophy of the uterus, which sometimes is observed in that malady; the present specimen is an instance of another lesion, frequently found in subjects affected with phthisis. This degeneration of the liver is not of frequent occurrence in this country; but in France it is very common, especially in females, and, as Louis has remarked, in persons who were by no means of dissipated habits. The specimen now produced to the Society was from the body of a young man who had been addicted to intoxicating liquors. Three months ago he was attacked by phthisis, which rapidly proceeded to a fatal termination. All the muscles of voluntary motion were exceedingly atrophied. The heart was very small and was loaded with fat; the lungs presented the usual symptoms of ulcerous phthisis; the glottis and the chordæ vocales were thickened and infiltrated with fatty matter, yet there had been during the illness no symptom referrible to the larynx; the voice had been strong, and there had never been aphonia. The liver was very light, its specific gravity much less than natural, and its entire structure very greasy; the fatty degeneration affected both lobes equally; the mesentery and intestines were loaded with fat, only the stomach and duodenum appeared healthy, and this was an interesting point in the case, as Broussais connects this condition of the liver with disease of the duodenum. The colon and cœcum were thickened, and in several places were ulcerated. As to the symptoms by which this peculiar state of the liver might be recognized during life, none are at present certainly known. Louis infers its existence from enlargement of the organ without functional disturbance. The same pathologist has observed that in phthisis there is no other organic disease of the liver along with this. The rapidity of its formation is also very remarkable. It has been found in cases of acute phthisis, which had ended in fifty days: in the present case the phthisis was of only three months' duration. The relation of this disease to phthisis deserves investigation. It has been found in forty-seven out of forty-nine cases, and in subjects at every age.

5. *Farre's Tubercle of the Liver.—Cancer of the Cervix Uteri.*—Mr. R. W. Smith presented a specimen of cancerous tubercle of the liver, from the body of a woman which he had examined that day, shortly before the meeting of the Society. This woman had been ill during the last six months: she was pale, sallow, and emaciated; she suffered pain and bearing down, with purulent discharge from the vagina. Some tubercles of the liver could be felt through the abdominal parietes. In the liver, the tubercles were both scattered through the substance of the organ, and also elevated



above the surface. These tubercles had no central depression; in consistence they presented variety; some were very soft, others beginning to soften in the centre, in others this process had not yet commenced. The hepatic structure, intervening between the tubercles, was of natural appearance. This is evidently the disease known as Farre's tubercle of the liver. In this case they were not limited to that organ; the omentum was also studded with them. In the left iliac fossa was a large tumour or mass, of a cartilaginous hardness, but the artery and vein, though enveloped in this diseased structure, were still pervious, and evidently unaffected as yet by the disease. In the pelvis the uterus was found to be as hard as cartilage; its cervix had been destroyed by cancerous ulceration. Mr. Smith observed, that he had met with this tubercle of the liver coexistent with cancer of various other organs, as well as of the uterus: he had seen it along with cancer of the breast, the pylorus, and the thyroid gland; perhaps most frequently with that of the pylorus.

6. *Ascites consequent on Scarlatina. — Compression of the Lung by the distended Peritoneum. — Bright's Disease in Kidney.* — Mr. O'Ferrall said, the specimens which he had then to lay before the Society were taken a few days ago from the body of a girl, six years of age, who had become affected with ascites after scarlatina. She had been only in St. Vincent's Hospital, under his observation, for a few days before her death. He observed that the ascites was large and well marked, while there was but a slight degree of anasarca, and that limited to the lower extremities. There was great difficulty of breathing, and a severe pain in the left hypochondrium, which caused the child to scream violently and frequently. Under these symptoms she gradually sunk, and for seven or eight hours before death was completely comatose. It was thought that some relief might have been obtained by paracentesis of the abdomen, but to this operation the child's family would not consent. When the body was examined after death, it was found that the abdomen contained a large quantity of straw-coloured fluid, with which the peritoneum was distended, and the viscera forced from their natural situations. The liver had been driven upwards, as high as the fourth rib, by this accumulated fluid. As soon as the abdomen was laid open, and the fluid evacuated, the viscera were observed to resume their normal situations, the liver descended. There was no lymphic deposition in any part of the abdomen. The peritoneum throughout had the appearance of having been a long time bathed in fluid. The liver was congested, and its serous coat opaque. A very interesting circumstance was the existence of Bright's disease in the cortical structure of the kidney [which was well represented in a drawing made from the recent part]. The distention of the abdomen had diminished the capacity of the chest. The lungs had been so compressed that they had the appearance of carnified lung, though they were not quite so solid, and hence the great dyspnœa so obvious in the latter stages of the illness. The remarkable features in the case were these—the occurrence of Bright's disease with very little



anasarca, and the diminished volume of the lung, giving it, to a great degree, the appearance of carnification.

*Nineteenth Meeting, April 2, 1842.*

DR. O'BEIRNE in the Chair.

1. *Aneurism of the ascending Aorta, compressing the Vena Cava.*—Doctor Law presented the recent specimens, and a coloured drawing, exhibiting the appearance of the patient during his last illness. The subject was a stout, athletic man, named Brown, aged 42, whom he had seen on last Saturday, in Sir Patrick Dun's Hospital. His face, neck, hands, and arms were then of a remarkably deep livid colour, as depicted in the portrait. This man had laboured under a slight cough during four months previous, and on the morning of last Saturday felt a sudden fulness in the face, and great oppression in the præcordial region. In the evening he was seen by Dr. Law, in the hospital. There was then œdema of the integuments over the thorax; the superficial veins in the neck were hard and firm to the touch; there was considerable anxiety; the respiration was distinct, and there was no dullness in any part of the chest; the heart's action was, perhaps, too diffused; it was audible under the clavicles; the pulsations were regular; the patient referred all his distress to the heart; the intellect was unimpaired, and there was a slowness in replying to questions, not, however, to any great degree. The most remarkable feature of the case was the extraordinary venous congestion of the upper part of the body, and the suddenness of its accession. Dr. Law referred this to some obstruction in the descending cava, but what might be the cause of this was involved in obscurity. The treatment adopted was bleeding from the arm, and on Sunday, cupping over the situation of the heart; at the same time stimulants were administered internally. Considerable relief was obtained by these means. On Monday he was quicker in replying; there was no appearance of coma, and the pulse was very weak. The stimulants were continued. On Tuesday, the pulse was still weaker at the wrist, but was very strong in the femoral artery; there was no symptom of aneurism. On Wednesday, the pulse at the wrist could no longer be felt; there was increased distress, but no stupor, and he gradually sunk. After death the body was examined. The heart was completely concealed by the lungs; the opposite laminæ of the pericardium were adherent by effused blood; the right ventricle was filled with a yellowish coagulum, extending into the auricle; the cava was narrowed; in the ascending aorta was an aneurism which had pressed the sides of the vein together; the coats of the artery, at this point, were thinner than in the rest of its course, and were transparent; the valves were free. Dr. Law remarked, that this was by no means a common case; Corvisart had referred to one somewhat parallel. In the present case, the suddenness of the attack, and the difference between the pulse at the wrist and in the femoral artery were as yet unexplained.

It might be mentioned, that a brother of this patient had died of a disease of the heart at the age of 27.

2. *Pneumonia in a Child of Eleven Months.*—Mr. Adams presented the recent specimens, taken from the body of a child eleven months old, which had died of acute pneumonia. It lingered but five or six days under this illness. The surface was very pale, yet the skin was intensely hot, and there was a short, painful cough. On the second day of the attack, the right lung was already solidified up to the clavicle; the left was still permeable, and the respiration puerile. On the third day, the respirations were 62, and the pulsations 170 in the minute. On the next day, the respirations were 72, the pulsations 200. When the chest was laid open, after death, some petechial spots were observable on the surface of the right lung, not unlike those met with in purpura; the lung did not crepitate; it looked more like spleen than lung; it sunk in water, and had the appearance and blue colour, as well as the density, of the foetal lung. This was a circumstance of importance to the medical jurist. Mr. Adams produced a drawing of a specimen of the same disease, that he had communicated at a former meeting. The subject in that case was a child who had inhaled very hot steam from the spout of a kettle; œdema of the glottis ensued. Tracheotomy was performed, and relief obtained; but pneumonia, much resembling that in the present case, came on, of which it died four days after the accident.

3. *Warty Deposition in the Larynx.*—*Hæmorrhage from an Artery opening into a tubercular Cavity in the Lung.*—Doctor Lees presented the recent specimens, taken from the body of an infant, that, about eight months ago, had been received into the South Union Hospital. It was at that time about a month old. It had a slight cough, and the usual symptoms of tubercular phthisis, but no stridor, no difficulty of breathing. Two mornings ago, immediately after awaking, a cough came on which was succeeded by a profuse vomiting of blood: it died soon afterwards. The examination of the body was carefully made by Mr. Johnson. The chordæ vocales and ventricles of the larynx were found covered with a fibrinous deposit. In the left lung, at the supero-posterior portion of the inferior lobe, there was a large irregular cavity, the interior of which had a granular appearance, not lined by any false membrane; there was coagulated blood in this cavity. Three or four branches of the pulmonary artery traversed the cavity; of these one only was pervious, and this one had ruptured about the middle of the cavity. This lung was much larger and more dense than that of the opposite side, which was also occupied by tubercular deposition in an earlier stage of development. In the bronchial tubes there was coagulated blood. Dr. Lees remarked, that Dr. Hodgkin had described tubercular cavities as lined by a peculiar secretion, which Laennec had considered as a false membrane; in the present case there was nothing of the sort. Dr. Lees referred to his communication, at a former meeting, of a specimen, in which blood-vessels opened into a tubercular cavity, giving rise to fatal hæmorrhage. There was in the present case another re-



markable lesion, that of the larynx. Dr. W. Stokes, at the last meeting but one, had presented a specimen of similar vegetations about the rima glottidis. As to the nature of this growth, there was a difference of opinion among pathologists, some regarding it as a peculiar morbid deposition, others as a hypertrophied condition of the natural structure of mucous membrane, the effect of inflammation. If we regard it as a result of inflammation, we must recognize it as a special modification of that process, appearing to consist in a lesion of nutrition more than of secretion, which occurs so frequently in children, in the plastic form.

4. *Pericarditis, with false Membranes in a State of extreme Hyperæmia.*—Mr. O'Ferrall said the specimen he then presented was an example of pericarditis, with enlargement of the heart. The subject was a boy of eleven years of age, who had sunk, at St. Vincent's Hospital, under repeated attacks of pneumonia, complicated with irritable bowels, and whose strength had been previously much exhausted, first from scarlatina, six months before his death, and afterwards from acute rheumatism, two months previous to the same, from either of which attacks he but imperfectly recovered. When admitted into hospital, his looks appeared evidently cachectic; he had dulness and frottement in the lower part of both lungs; there was no evidence, however, of liquid effusion. He was relieved by treatment, but only to suffer another attack of pneumonic inflammation; and, after a series of these relapses, he died. Upon examination of his thorax, the lungs were found in the condition that the physical signs would lead to be expected. Besides this, the heart was enlarged, and the surfaces adherent by bands of lymph, in the process of organization. It was to the appearance of this lymph that Mr. O'F. wished especially to call attention: at the first glance, one would suppose it to be composed of coagula of blood, so deeply coloured was it, yet the small quantity of fluid contained in the sac of the pericardium did not contain a single blood globule. Mr. O'Ferrall would remind the Society of a case of true hæmorrhagic pericarditis, which he had presented to them three years ago, and of which he now produced a drawing. In that case the blood had evidently been effused along with the lymph; but the present appeared to be a case where the organizing lymph owed its deep red colour to excessive hyperæmia. It was impossible, of course, to prove the truth of this position by injection, the greater number of the highest pathologists having been hitherto unable to trace the vessels of organizing lymph into the neighbouring tissues, if indeed they really have any such communication; but it had been ascertained, that channels for the conveyance of blood existed in the lymph before the existence of vessels with proper coats; and from the appearance of the lymph in this case, it was probable that the hyperæmia here existed in such channels.

5. *Exfoliation of the Head of the Femur in Morbus Coxæ.*—Mr. Adams presented the exfoliated head of the femur of a child six years of age, which had laboured under hip disease for two years, and had recovered after the exfoliation with a false joint. This spe-



cimen he had received from Mr. Allingham. Mr. A. remarked, that where this exfoliation has occurred, the patients have recovered. The present was the third instance of this occurrence which had been communicated to the Society.

6. *Cerebral Apoplexy without premonitory Symptoms.—Steatomatous Deposition in Arteries at Base of the Brain.*—Doctor Lees said the specimens he had to produce were taken from the body of a man aged seventy, who had appeared well up to yesterday, when he suddenly lost voice and sensation for two or three minutes, and was then found to be paralysed at the left side. He recovered the power of speaking, but talked incoherently; in an hour afterwards became comatose, and died within four hours from the first attack. There had been no premonitory symptoms, unless some disposition to drowsiness, and slight incoherence in discourse during a few days previous. When the calvarium was taken off, the brain externally appeared normal. On cutting into it, a large recent clot was found extending into both ventricles. Inferiorly, there was an extravasation extending from the pons to the spinal marrow. The arteries at the base of the brain were the seat of steatomatous deposition. The left ventricle of the heart was hypertrophied, and there was calcareous deposition in the mitral valves, and to a slighter extent in the tricuspid.

7. *Intus-susceptio.*—Dr. Evory Kennedy communicated a specimen of intus-susceptio, that had occurred in a child four months old, who had died in thirty hours from the commencement of the illness. This child had been in perfect health up to last Tuesday evening. The bowels were confined, and a dose of castor oil was administered, which was followed after a few hours by another. On the next morning there was a hæmorrhagic discharge from the bowels, mixed with feculent matter, and these discharges became frequent during the day; there was also vomiting of a dark fluid, but this was not frequent; none of the blood which was discharged coagulated; the pulse was small and very rapid; acetas plumbi and Dover's powder were ordered in suitable doses, but without success. On Thursday morning the little patient died, and when the body was opened the intus-susceptio was discovered, consisting of a considerable portion of the colon, the cæcum, and a part of the ilium: there was no peritoneal inflammation. It was evident that the fæces which were discharged must have been lying below the obstruction in the intestinal tube.

*Twentieth Meeting, April 9, 1842.*

DR. MONTGOMERY in the Chair.

1. *Dissecting Aneurism of the ascending Aorta bursting into the Pericardium.*—Dr. Lees exhibited to the Society a specimen of an unusual variety of aneurism of the ascending portion of the arch of the aorta. The subject from whom the specimen was derived was a woman about sixty years of age, who was apparently in perfect health on the day of her death, which occurred during the last week.

After breakfasting heartily, she suddenly screamed, fell back, and expired in five minutes. On opening the pericardium a large quantity of coagulated blood was found interposed between it and the heart, which was adherent at several points to the pericardium, evidently the result of a former attack of pericarditis. The heart was hypertrophied. There was a rent about two inches long in the cellular coat of the posterior wall of the ascending aorta. The longer axis of this rent corresponded to that of the artery just where the pericardium is reflected from the aorta on the pulmonary artery. The external and middle coats of the aorta in this situation were separated from each other for a considerable space by a quantity of coagulated blood, which reached superiorly as high as the junction of the transverse with the descending portion of the arch, and inferiorly as low as the base of the heart. The cellular coat having been slit up anteriorly, there was brought into view a large transverse rent in the internal and middle coats, not coinciding with the opening in the external coat. It was about an inch in extent, and was situated in the anterior wall of the ascending aorta, at the distance of an inch and a half above the heart. There was an atheromatous deposit in the mitral and aortic valves, and also between the internal and middle coats of the aorta and of the large vessels arising from the arch. Dr. Lees remarked, that this unusual form of aneurism had been described by Laennec, and that similar cases had been recorded by his friend Mr. R. W. Smith in the 9th volume of the *Dublin Journal of Medical Science*.

2. *Benign Osteosarcoma of the Hand*.—Dr. Fleming exhibited a specimen sent by Dr. Cusack, of a disease of the bones, which has been designated *spina ventosa* by some, by others, *benign osteosarcoma*. Of this disease several specimens had been communicated to the Society by the Surgeon-General and by Messrs. O'Ferrall and Adams, of whom the latter had particularly described this affection in his article on *abnormal conditions of the hand*, published in Todd's *Cyclopædia*. The subject from whom the present specimen had been taken was a young lady of strumous habit, about twenty years of age, and who had glandular enlargements in the neck. The disease of the bone involved the ring and little finger of the right hand. It commenced nine or ten years ago as a small tumour on the dorsum of one of the phalanges, which slowly increased in size up to twelve months ago, when, after a blow accidentally received by a fall, it enlarged very much and became painful. The pain was not confined to the tumour, but darted up the arm to the axilla. The integuments were not discoloured, and were moveable over the tumour, but all the prominent points on its surface became ulcerated. Amputation was found to be necessary, and was performed by Dr. Cusack at the carpal joint. On cutting into the tumour the structure appeared cartilaginous or fibro-cartilaginous within a very thin shell of bone. A section of the tumour showed a cartilaginous material, enclosed in a bony shell, which was remarkably thin. Mr. Fleming



alluded to the cases of this disease described by Mr. Adams, at the ninth meeting of the present session, held January 22nd.

3. *Scirrhus of the Pylorus.*—*Cancerous Deposition in the Mesentery and Intestines.*—Dr. Greene presented a very well-marked specimen of scirrhus pylorus from the body of a man who died in the Whitworth Hospital during the last week. The illness of this patient was described to have commenced nine months previously with anorexia, thirst, acid eructations, and constipation. There was no vomiting or nausea. After some time he began, in addition to the preceding symptoms, to feel pain, but not of a violent character. It was felt over the umbilicus and in the epigastric region, and was sometimes like colic. When admitted into the Whitworth Hospital, he was labouring under intense jaundice. There was a fulness in the epigastrium, but no defined tumour could be detected. There was no vomiting. Dr. Greene, on examining the patient, was induced to ascribe the jaundice to a mechanical obstruction. About ten days before the patient's death, coffee-coloured vomiting came on. A week ago he became delirious, and died in that state. On opening the body the stomach was observed to be dilated, but was not ulcerated. This coincides with what Andral has remarked, and also with a case communicated to this Society by Mr. O'Ferrall, in which there was coffee-coloured vomiting, but no ulceration of the stomach. The pylorus in the present specimen was very hard, thick, and firm. Its calibre was greatly contracted, the stricture being narrowest towards the stomach. The ascending and transverse colon and head of the pancreas were bound down into a cancerous mass, with which the duodenum also was connected; the cystic and hepatic ducts were both obstructed by the cancerous growth; they were both much dilated above the strictured part. There were cancerous masses in the mesentery, in several parts of the small intestines, and between the rectum and the bladder. The coats of the gall bladder were hypertrophied; its mucous lining was ulcerated in several spots, leaving merely the peritoneal coat to prevent the escape of its contents; there were no calculi in it, nor had there been any pain felt in that situation during life.

4. *Uterus softened and relaxed.*—Doctor Montgomery presented the uterus of a patient that died in Sir Patrick Dun's Hospital during the last week. He regretted that the history of the case was defective, as the patient had been unable to detail it; but he had learned some particulars of it from Dr. Henry Kennedy, amounting generally to this, that she had been delivered five weeks before her admission into Sir P. Dun's; that after her recovery she had been attacked by sudden and very profuse hæmorrhage from the uterus, after which fever set in, and she was brought to the hospital in the last stage of typhus. The uterus, it would be observed, was not so small as it should have been at that period after parturition; and there was a remarkable relaxation and softening of its tissue, the effect of the hæmorrhage. Within the cavity, the placental mark was larger and more prominent than usual. There was a small tu-



mour depending from the Fallopian tube of the right side. The entire of the uterus was very vascular, and the veins greatly enlarged. There had been in this patient a peculiar soreness and tenderness of the entire surface after her delivery; this Dr. Montgomery considers indicative of disease within the uterus. The same symptom is observable in another patient now in Sir P. Dun's, a female recently delivered, and in whom there is also an extreme quickness of the pulse.

*Twenty second Meeting, 16th of April, 1842.*

MR. CARMICHAEL in the Chair.

1. *Stricture of cardiac Extremity of Œsophagus.—Scirrhus?*—Mr. O'Ferrall presented the recent parts and an illustrative coloured drawing of a case, where the Œsophagus was strictured at its cardiac end. The subject was a man sixty-five years of age, who had for a long time laboured under dysphagia, which progressively increased. Mr. O'F. had only seen him in the last week before his death. The patient at that time referred the difficulty in swallowing to a point opposite the cricoid cartilage. He never had Œsophageal vomiting. Mr. O'F. pointed out in the specimen, how the muscular tunic of the Œsophagus became gradually thicker towards the cardiac extremity; at the seat of the stricture all the tissues appeared amalgamated, and many lymphatic glands, some of which were softening, were enveloped in the diseased part, all together forming a very hard tumour. Internally, the stricture was sharp and well-defined, with many small spots of superficial ulceration at the narrowest part. A longitudinal section displayed the thickening of the coats and the glandular bodies included in the morbid part; the texture of the thickened portion was explored, by carefully dissecting off the mucous coat, when it was perceived that the submucous and muscular coats were hypertrophied, and that the muscular had completely lost its natural appearance; at the point of stricture all the tissues were lost and indistinct; the morbid condition might therefore be described as hypertrophy of the tissues, merging into a carcinomatous state at the stricture. From a horizontal section near the stricture, and either above or below it, a creamy or cerebriform fluid exuded, when the thickened parts were pressed firmly. It was for the Society to consider whether this was a specimen of true cancer or not.

2. *Scrofulous Deposit on the Peritoneum.—Communication between the Uterus and Bladder effected by Ulceration.*—Mr. R. W. Smith presented several specimens of disease from the body of a female of about thirty years of age, who, in last August, began to complain of pain in the side, in the region of the liver. She was treated for hepatitis, but without obtaining relief, and at last died of peritoneal inflammation: she had no jaundice. On examining the body after death, the usual results of peritonitis, both acute and chronic, were observed, and also very extensive disease in the pelvis:

there were tubercles developed to a great extent in the false membranes, particularly on the surface of the liver; in the pelvis, the ravages of disease were very remarkable; the posterior wall of the uterus was ulcerated and sloughy, in some parts quite broken down, but no part of it had the hardness of carcinoma; an opening had been effected by the disease from the uterus into the bladder, through which there was a tubercle projecting; the bladder was in a state of inflammation; the orifice of the right ureter was almost completely obstructed, and that of the left in a less degree; the uterus was enlarged, and was infiltrated with purulent matter, which extended into the Fallopian tubes. The intestines and the mesenteric glands were extensively affected with tubercle and scrofulous matter, in several stages of development; there was no ulceration of any portion of the intestinal canal. It was a question whether this disease of the pelvic viscera was malignant or not. Mr. Smith inclined to the opinion that it was rather scrofulous degeneration of the uterus. The case had all the characters of struma, except that the lungs were unaffected. He had not observed the Fallopian tubes filled with morbid deposition in cases of cancer of the uterus.

3. *Morbus Coxæ; luxation of the Head of the Femur.*—Mr. Adams said he had been requested by Mr. Shannon, the surgeon of the South Union, to communicate to the Society a specimen of disease of the hip-joint in which luxation was produced, an occurrence unusual in this affection. Besides the parts concerned he had also sent a cast and a drawing. The subject of this case was sixteen years of age; the head of the femur it would be observed was softened and dislocated on the dorsum of the ilium; the limb was shortened and adducted: abscess and suppuration had ensued, and the patient had sunk under the continuance of hectic. The capsular ligament had been completely destroyed.

4. *Acute Gastritis.*—Mr. Robert W. Smith said he wished to lay before the Society a specimen which was highly interesting in a medico-legal point of view. The subject was a female, æt. 20, who had been admitted into the Hardwick Hospital, in the last stage of peritoneal inflammation; she had been a prostitute, and had given birth to a child about a week before her admission; soon after parturition she was attacked with symptoms of gastritis and peritonitis, which proved fatal within 24 hours after her admission into the hospital. The child had been found dead, concealed under the floor of the room in which the mother had been delivered. Upon examination of the body, the anatomical characters of acute peritonitis were found, lymph had been copiously effused; the stomach was in a state of most intense inflammation: in some places the mucous membrane presented patches of the brightest scarlet, the vessels being distinct and arranged in an arborescent form; in others the membrane was perfectly black, as in case of poisoning by sulphuric acid, but there was no abrasion either in the œsophagus or stomach the most careful chemical analysis (in conducting which, Mr. Smith had the valuable

assistance of Professor Apjohn) failed to detect the presence of any poison. (*Museum, Richmond Hospital.*)

*Twenty-third Meeting, 23rd of April, 1842.*

Dr. MONTGOMERY in the Chair.

1. *Caries of the Vertebrae*.—Doctor Lees produced recent specimens illustrative of the pathology of this disease. The first case occurred under his care in the Hospital of the South Union. The subject was a child aged five years, which was brought under his notice for the first time about six months ago, in consequence of having been observed to stand crooked or bent towards one side. On careful examination of the spine a slight projection was discovered at the lower part of the cervical vertebrae. An issue was inserted in the neck, and the usual remedies directed. However the child's health gradually declined, the pulse became greatly accelerated, and during the last week it died, labouring under diarrhoea and lobular pneumonia. It had always complained of pain in the front of the chest, but never of any in the back. There was paralysis of motion of the upper and lower extremities without rigidity of the muscles. The fæces and urine were discharged involuntarily. The body was inspected after death; the bodies of the five upper dorsal vertebrae were completely carious and the intervertebral substance destroyed; the sixth and seventh were quite black and rough; the body of the ninth was very vascular; the intervertebral substance between the seventh and eighth was quite sound. The theca of the medulla spinalis was quite thickened, and very vascular; the medulla itself was quite yellow and softened. It was remarkable that in this case no abscess had been formed, though so many vertebrae were engaged. There was no deposition in the diseased vertebrae, and no tubercles in any of the viscera.

The next specimen Dr. Lees had to present was sent to him by his colleague Mr. Shannon. The subject was a man of strumous habit, who had died of phthisis; he was also paralysed; his lungs were found to be loaded with tubercles; the three last of the dorsal and the first of the lumbar vertebrae were diseased; there was a cheesy deposition in the substance of the bone and also between the ligaments and bodies of the vertebrae; the spine in this situation was bent to a considerable angle, and the canal was enlarged at the angle of the curvature. This was a good specimen of the scrofulous form of the disease.

2. *Carcinoma of axillary Glands and Mamma*.—*Scirrhus of the Head of the Pancreas and Ovaria*.—Mr. R. W. Smith said he had to lay before the Society several specimens of carcinomatous disease, taken from a woman thirty years of age. She had first observed a swelling of the glands of the axilla, and this had existed twelve months before she was seen by Mr. S. The disease commencing in the axilla indicates, he observed, a more inveterate affection than when it makes its first appearance in the mammary gland.



In this patient, there was a hard, rugged tumour in the posterior part of the axilla, which was often affected with a lancinating pain; at a later period the mamma became affected. There were also tubercles of the skin, scattered over the neck and chest; these were pale and hard, and occasionally painful. These tubercles indicate a general contamination of the system, and in such cases operation would be worse than useless. The arm was swelled, and exhibited several ecchymoid vesications, filled with a discoloured fluid. In the progress of the case there came on vomiting, epigastric tenderness, and gastritis; these were succeeded by stupor, listlessness, dilated pupils, and a state of the limbs like that of a patient in catalepsy. In a week afterwards, obstinate constipation and jaundice ensued, after which she fell into a state of coma, in which she died. The results of the examination after death explained most of the symptoms. The jaundice was caused by an obstruction of the duct produced by the head of the pancreas, which was enlarged, scirrhus, and contained several distinct tubercles; this compressed and completely obstructed the duct; the gall bladder was dilated with bile. The constipation of the bowels might be referred to the obstruction to the flow of the bile, and to the compression made on the rectum by the ovaria, which were scirrhus; there was scarcely room for the little finger to pass through at this place; below it the rectum was inflamed. The œdema of the arm was in like manner elucidated, by finding that the scirrhus glands in the axilla had compressed the axillary vein, the blood in which was coagulated; the roots of the median nerve were surrounded by a mass of scirrhus matter, but the nervous tissue itself was not affected. A similar observation had been made by Cruveilhier. The mamma presented the usual structure of scirrhus; the nipple was very little retracted. The head was not opened. Mr. S. remarked that disease of the pancreas was usually limited to the head. Mr. S. thought it important that in every case of cancer of the breast, with diseased axillary glands, the condition of the veins should be examined. (*Museum, Richmond Hospital.*)

3. *Ruptured Bladder in the Female.*—Mr. R. W. Smith said he had another specimen to lay before the Society, which was interesting, as being one rarely met with. It was a case of rupture of the bladder, from the body of a female, fifty years of age, who had, while in a state of intoxication, fallen across the edge of a tub. This accident is one of rare occurrence in the female, perhaps from the bladder being in some measure protected by the uterus and the concavity of the sacrum. The symptoms in the present case were syncope, vomiting, and tympanitic distention of the abdomen. In three days after the accident she was sent into the Richmond Hospital; a quantity of bloody fluid was drawn off by the catheter; the countenance was anxious, and all the features appeared collapsed. She lived five days after the injury. The peritoneum was acutely inflamed; the rent in the bladder was very large; it was transverse in its direction, and was situated in the posterior and upper part of the bladder. Mr. S. observed, that rupture of the bladder is almost always caused by direct violence; some-

times it is produced by concussion, of which there is an instance related by Dr. Cusack, in the *Dublin Hospital Reports*, where it had occurred in a person who had fallen from a considerable height, but had lighted on the feet. Dr. Harrison had published several cases of ruptured bladder in the *Dublin Journal of Medical Science*; all these had ended fatally, at periods of from five to eight days from the receipt of the injury.

4. *Thoracic encephaloid Tumour compressing the Vena Cava.*—

Mr. O'Ferrall presented the recent specimen. The subject was a female, thirty-five years of age, who was brought into St. Vincent's Hospital, labouring under what she called erysipelas of the face and neck. Her face was tumid and sublivid; her neck presented the tippet-formed swelling; there was a degree of venous turgescence of the whole of the upper portion of the trunk; there was orthopnoea and a very distressing cough; absolute dulness and bronchial respiration under the right clavicle; below this point the chest sounded clear, but the respiration was feeble. Posteriorly, the right chest sounded comparatively dull on percussion; respiration in the left lung puerile. There was double bruit de soufflet at the base of the heart, extending a short way up the sternum, and inclining a little to the left of the mesian line; the right radial pulse was smaller than the left; there was some difficulty of deglutition; she lived for five or six days in the hospital; her breathing became stridulous before her death. A consideration of all the symptoms induced Mr. O'F. to diagnose the existence of some intrathoracic tumour pressing on the superior cava. His diagnosis was negative as regarded aneurism, on these grounds:—first, because the extent of dulness posteriorly was greater than he had ever remarked in aneurism of the arch; and, second, because, although there was a murmur, its greatest intensity was not within the limits assigned by percussion to the tumour in front. He, therefore, inclined to the opinion that it was malignant disease. On examination after death, a quantity of straw-coloured fluid was found in the right pleura, but there was no appearance of inflammation. The lung felt solid to the touch; it was adherent to a large morbid growth, occupying the anterior mediastinum. There were numerous masses of the same morbid deposit in the substance of the right lung; the whole was encephaloid. The malignant growth extended to the posterior mediastinum, surrounding the trachea and œsophagus. The superior cava passed through the mass, and was obstructed by it; a mammillary projection nearly closed the canal of the vessel. The pericardium contained bloody fluid; the heart was not enlarged; the septum of the auricles remarkably thin; the foramen ovale open to the size of a silver fourpence. The septum presented other minute perforations; the valves of the pulmonary artery attenuated and cribriform. Mr. O'F. remarked, that the sudden invasion of the symptoms might be explained by the perforation of the vena cava by the morbid growth. The connexion of the murmur with the cardiac lesions deserved a separate consideration.



Fourth Meeting, 30th of April, 1842.

Dr. MONTGOMERY in the Chair.

1. *Cryptogamic Vegetations on the mucous Coat of the Stomach after Death.*—Doctor Lees produced portions of the stomach and upper part of the intestinal canal of a corpse that had been interred three months ago, and exhumed during the last week for medico-legal investigation. The mucous surface of the stomach was of a deep chocolate colour, and on it were scattered numerous white circular bodies, elevated at the edge and depressed in the centre; some of these were very minute, and had the appearance of a white powder sprinkled on the membrane. This appearance had been noticed by Orfila as one of those which had been mistaken for arsenic. Buchner too had mentioned a white granular substance containing fat, found lining the stomach. The question arises, what is the intimate nature and origin of these bodies? Are they fungi? they are certainly not calcareous depositions. They are partially soluble in alcohol, and they melt before the blowpipe. They have not been described as fungi by any writer on medical jurisprudence that Dr. Lees was acquainted with. The scales in tinea capitis were by some supposed to be of vegetable origin. Christison and other writers might be consulted as to this appearance.

2. *Aneurism of the Thoracic Aorta, without Murmur.*—Mr. O'Ferrall produced the recent parts and an illustrative drawing of a case of aneurism of the thoracic aorta, which was attended with much difficulty in making the diagnosis. The subject was a man forty-five years of age, whom he had been called on to see in consultation. He laboured under great dyspnœa occurring in paroxysms in which he was almost asphyxiated, constant difficulty of swallowing solids, and stridulous breathing; there was no bruit of any kind; no dulness; no sign of interrupted circulation; the respiratory murmur was rather feebler on the left side, and there was general bronchitis, but not to an extreme degree. The cause of the urgent symptoms was a matter of doubt. Among the medical attendants of the patient there was a great difference of opinion both as to the origin of the dyspnœa and the means to be adopted for its relief. One proposed to excise the uvula, another to administer emetics and mercurials. The stridor was equally matter of doubt. It had not occurred until the patient had for three months suffered dysphagia of solids. The medical attendants considered it to proceed from the rima glottidis, but Mr. O'Ferrall was of opinion that the obstruction, whatever it was, had its seat below. There was no positive evidence of intra-thoracic tumour, but that such existed he inferred from the rational signs and from the history of the case. The paroxysms of dyspnœa recurred every evening during three weeks, and it was in one of them that the patient died. In these attacks his face became black and the whole body cold and livid, the fæces were discharged involuntarily, and consciousness was almost entirely lost. From this



state relief was obtained by the application of warmth and the use of stimulants and counter-irritants. The stimulants were also useful in relieving the bronchitic symptoms. When the chest was opened after death it was found that there was an aneurism of the arch of the aorta which pressed upon the trachea and the œsophagus. The aneurism was situated at the central and posterior part of the transverse portion of the arch, between the innominate and the left carotid; there was a large opening into the aneurism from the artery. Mr. O'Ferrall observed, that several of the symptoms in this case were explicable by the aneurismal tumour and its relations to the neighbouring parts, but it was not quite so easy to explain the intermissions which were so remarkable in the progress of the illness. Two years ago, Mr. O'Ferrall had ascribed such intermissions to a lesion of one or both of the recurrent nerves. In the present case the pneumo-gastric nerve at the lower part of the aneurismal tumour spread out into a cellular web, in the situation where the recurrent should have been given off. In some cases of thoracic aneurism the voice is affected; that the aphonia is, at least in some of these, attributable to the lesion here described may be inferred from the present as well as from some former cases which he had brought under the notice of the Society.

3. *Aneurism of Thoracic Aorta bursting into the Pericardium.*—Doctor J. C. Ferguson presented the recent parts concerned in an aneurism of the thoracic aorta. The subject was a man who came into Sir P. Dun's Hospital three months ago. The diagnosis was there made that he laboured under intra-thoracic aneurism. On the day before yesterday he died suddenly in a state of syncope. The aneurismal tumour lay to the right of the trachea on which it pressed. The calibre of the trachea just above its bifurcation had been diminished by the pressure, and during the progress of the complaint stridulous breathing had been a very prominent symptom: there had been neither aphonia nor dysphagia. The tumour also pressed on the descending cava and was adherent to it. The innominate was almost obliterated where it came off from the aorta. During life there was a remarkable tumefaction of the veins in the neck, and pulsation was absent in the right radial artery. These symptoms were explained by the morbid phenomena. There was a copious effusion of blood into the pericardium amounting to more than a pint. The rupture in the aneurismal sac was small.

4. *Dislocation of the Head of the Femur in Morbus Coxæ.*—Mr. R. W. Smith presented a specimen of a morbus coxæ with dislocation of the head of the femur on the dorsum of the ilium. Mr. Smith observed that the shortening of the limb in morbus coxæ is seldom the result of dislocation. It is most usually effected by an absorption of the head of the bone, or by a widening of the acetabulum, or by an incomplete luxation. In the present case the progress of the disease was very rapid. The subject was a boy fourteen years of age, was only six months ill, and the dislocation occurred about four months before his death. The head of the bone was protruding

through the integuments which had sloughed. The acetabulum was ulcerated, denuded of its cartilages, and the bony portions of which it is composed had become detached almost completely from each other. The epiphysis of the femur was separating. The joint was surrounded by an immense abscess. The head of the femur was coated with lymph, it was lying under the gluteus medius, between that muscle and the gluteus minimus.—*Museum, Richmond Hospital.*

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*An Address delivered before the Dublin Obstetrical Society on the Opening of their Sixth Session, on the 4th December, 1843, by W. F. Montgomery, A. M., M. D., M. R. I. A., Fellow and Professor of Midwifery in the King and Queen's College of Physicians in Ireland, and one of the Vice-Presidents of the Society.*—GENTLEMEN—Members of the Dublin Obstetrical Society—since, by a choice which I cannot but regard as much more the offspring of your feelings of partiality, than in accordance with the deliberate results of your judgment, you have placed me in this flattering position, and devolved on me the duty of addressing you on this occasion, the opening meeting of your Sixth Session; I beg to assure you, that although I cannot venture to hope that my performance of the task will be in any way commensurate with either your, or my own ideas of the importance of the subject, I have not been careless in its consideration; and, in the first place, offer you my best acknowledgments for this, the second honour which your kindness has induced you to confer upon me.

I have next to congratulate you on the flourishing state of your Society, the utility of which is, long since, fully established in public opinion.

If there were wanted an additional evidence of the success with which the objects of this Society have been accomplished, it is to be had in the interest with which your discussions have been listened to, and your meetings attended by several of the senior members of the profession, to whom, I am instructed by your Committee to offer the best thanks of the Society for their frequent visits at the Meetings, and the many instructive remarks and suggestions with which they have, on many occasions, so ably and kindly illustrated the questions under consideration, shedding the lights of their matured experience over subjects, which, in less experienced hands, might have been obscured by doubt and difficulty in their investigation; and thus materially forwarding the success, and raising the character of this Society by their countenance and support; while on the other hand, for myself, I cannot avoid saying, that on very many occasions indeed, I have heard, with no less surprize than admiration, the fund of correct practical knowledge displayed in this room by the junior members of the Society, to whom, I beg to premise, the observations which I have this evening the honor to offer, are principally addressed; and if, while doing so, many of my remarks shall, to our more senior brethren, who have this evening, as on many former occasions, made us their debtors by their presence, sound trite or



trivial, merely conveying to their ears matters which are already to their minds "familiar as a household word," I hope they will, even so, bear with me, considering the necessity of the case, and that they will permit me to plead my apology in the words of Platner's epigraph to his book :—

"Hoc autem velim omnes tenere et scire, me scripsisse tironibus, non excellentibus in arte professoribus, nec peritis atque exercitatis magistris; quibus, in hoc libello, plura leviora et vix commemoratione digna videbuntur; quæ, tamen, discentium in gratiam, repetenda fuerunt."

It is almost superfluous for me to tell you that midwifery is no longer included within the narrow limits of the old definition, which declared it to be only the "*Art of assisting women in labour.*" At the present day, the practitioner in midwifery, in addition to a thorough knowledge of all the varieties of labour and the casualties with which they may be complicated, is expected to be familiar, not only with the anatomy of the uterus in its virgin and gravid states, but with its physiological laws also; with the diseases to which it is subject; with the nature of the organized products which may form within it, or be expelled from it, with the symptoms which indicate the existence of pregnancy, and the laws that regulate gestation and its duration; the characters by which the age of the foetus may be determined, and the many and important diseases of childhood and early infancy, the treatment of which, gentlemen, I pray you observe, is to be learned but in one way; and that is, by acquiring first a thorough knowledge of anatomy and physiology, especially as regards the female system, and then such an acquaintance with the general practice of medicine, as will enable you to apply its principles to those particular cases, with the peculiarities of which, your frequent observation of all the circumstances of the puerperal woman has made you thoroughly familiar.

This, you will say, is asking much. Be assured, that if you aim at a high standing in this department of the profession, and its accompanying rewards, you cannot do with less. Society now expects this knowledge of us, because they see and understand that our line of practice and opportunities for observation, furnish us with abundant materials for its acquisition—and in this, they come unquestionably to a right conclusion: and be assured, society *will have* this amount of knowledge in you, or it will not *have you*, without it.

Every day's experience makes our opinions the tribunal, before which, are decided questions that touch the dearest and holiest ties that hallow our social relations; the fair fame of purity and virtue, the fidelity of married life, the claim to legitimacy, and, as a consequence, the succession to wealth and honorable title; and in some instances connected with judicial investigations, as in cases of *clandestine delivery*, suspicion of *infanticide*, or in *pleas in bar of execution*, when a woman, condemned to death, pleads pregnancy to save her from execution, life itself may depend on the accuracy of our judgment.



It is a well-known fact that a noble family in Scotland was doomed to years of domestic misery and alienation, by the ignorance, or want of caution of their medical attendant, who pronounced an hydatid to be an early abortion.

Gentlemen, it may, at the present day, seem almost incredible that there should have been those who maintained that practical midwifery required no study, and denied its utility; asserting the all-sufficiency of the powers of unassisted nature; yet such has been the fact. But a doctrine so obviously futile requires *now* no formal refutation: that it should have had its advocates, we cannot wonder at, when we consider how happily it coincided with the fastidious theories of the enthusiastic admirers of nature; how conveniently it suited the supineness of those who were averse from inquiry, or indisposed to exertion; how effectually it apologized for ignorance, and how plausibly it extenuated the evils arising from neglect, or the want of the timely and judicious application of artificial assistance.

Far be it from me, to advocate any thing like indiscriminate interference in the process of natural labour. I know too well that nature is as truly admirable in the preservation of the *individual*, as in the perpetuation of the *species*. I see that all the organs, with which she has supplied the different classes of animated nature, the properties, with which she has endowed them, and the powers with which she has enriched them,—all tend ultimately to this one great object. The various instruments employed in the reproduction of the vegetable and animal kingdoms, are but the different machines which support the brilliant decorations of the organic world, and the process, by which the humble acorn is developed, matured, and shed from its calyx, or the unsightly chrysalis transformed into the rainbow beauty of the butterfly, is, I feel assured, as worthy of Him, who “measured the waters in the hollow of his hand, and meted out the heavens with a span,” as deserving of admiration in its contrivance, and as perfect in its operation and accomplishment, as that which ushers the infant monarch into life.

But, I also believe that the providence of nature effects its purposes and intentions by universal laws, and that what we call the powers of nature have their limits, to which they go, and no further, in the present government of visible things. I cannot but remember the denunciation, “I will greatly multiply thy sorrow and thy conception, and in sorrow shalt thou bring forth children;” and I know that the sorrow, and the suffering, are permitted to be abridged in their duration, and alleviated in their degree by the judicious interposition of a well-timed assistance;—and while I unhesitatingly acknowledge that in many, nay, in the great majority of instances, we are, and should be, but the passive observers of nature’s operation, I must as distinctly maintain and insist, that it requires no less judgment to determine when we should be so, than when we are called upon to aid her, or even take the matter altogether out of her guidance.

By the advocates of nature’s all-sufficiency, it has been objected,

that those cases of extreme difficulty and danger which require assistance, are the result of artificial habits. Well, be it so—with the *cause* we have nothing to do, as it is beyond our control—the *effect* must be remedied, or the patient dies.

But the assertion is false in fact; for instances of deaths in child-bed are recorded from the earliest periods of Scripture history, and Lycurgus passed a law 884 years before the Christian era, forbidding inscriptions to be put upon the tombs of women *who died in labour*; it is, moreover, notorious to all, that even the lower animals, living in a state of nature, unrestrained and unvitiated by art, occasionally die in parturition; and to many who hear me, the fact is well known, that when William Hunter attempted to reform the mischievous practice of the ancients with regard to the hasty extraction of the after-birth, and taught that it might, nay, *ought*, to be left entirely to nature, and practised what he taught, the loss of several human lives, owing to the retention of that organ, was the result of that practice, and evinced the necessity of adopting the more modified and more reasonable practice of the present day.

On the other hand, there have been, and still are some, who, although they confess the necessity, and acknowledge the utility of midwifery, yet accustom themselves to consider its study and its practice, as matters of such common-place facility, as to require little or no attention, for the acquisition of knowledge in the one, or expertness in the other. In those who are never to practise it, this is an error to be lamented, but in those who are to adopt this branch of the profession, it is *a fearful delusion*—a truth, which they will find it too late to learn, when practice has involved them in circumstances of such danger, or such peculiar delicacy, that on the one hand life or death, and on the other, the happiness or misery of many are depending on the accuracy of their discrimination, and on the promptitude and dexterity of their action. A. Leroy, amongst a thousand other sneers, said, that all that was worth knowing in the whole practice of midwifery might be written on the back of a playing-card. Of this remark, I will only observe, that every man, who speaks his opinion sincerely, speaks according to the amount of his own knowledge, and Leroy, of all he undertook, never finished anything.

The emergencies of midwifery practice are often eminently urgent, and admit of no delay to seek the opinion, or the assistance of others; fulfilling truly the poet's description of the rapid issue of battle:

“————— Quid enim? concurritur, horæ  
Momento cita mors venit, aut victoria læta.”

It would be tedious to enumerate all the different circumstances, in which the truth of this assertion might be illustrated; it will be amply sufficient in the way of proof, to allude to one or two, and I believe I need only mention puerperal convulsions, presentation of the placenta, and other forms of profuse hæmorrhage, and rupture of the uterus, and dispense with further comment.

Again, it is to be recollected, that, while in the treatment of ordinary cases, in medical and surgical practice, one life only is at stake,



the practitioner in midwifery has always a double responsibility ; and it unfortunately, but too frequently happens, that the safety of both intrusted to him is incompatible. Under such circumstances, he will have great reason for joyful congratulation, if by the judicious interposition of his best exertions, he be always able to preserve to society the more valuable life of the mother, without having prematurely sacrificed that of the infant : for, I believe there is not, in the whole range of medical or surgical practice, an occasion which demands more mature deliberation, more precise knowledge, or a clearer judgment, than are required to enable the accoucheur to determine, in cases of tedious and difficult labour, how long he may trust to nature, without compromising the life of the mother, or entailing on her an existence of misery worse, as far as we can judge, than death itself ; or, on the other hand, to fix—awful decision !—the precise time when he is imperatively called on to sacrifice the child, for the safety of the parent. Poignant, indeed, and full of agony must be the feelings of the man who, under such circumstances, stands self-accused and self-convicted of having neglected, or presumptuously slighted the opportunity of acquiring the knowledge suited to such an occasion : and if, while he stands vacillating in uncertainty and indecision, the doom of the victim be sealed, and the mother of a family be consigned to death, let him shudder at the name, with which a strict morality may justly brand the part he has acted in the tragedy.

How little will the dark shadows of this picture be enlivened, if, while life escapes, it remains only to be endured, but not enjoyed, and a loathsome disease, and a childless bed are allotted as the sufferer's future inheritance. The feeling which prompted the exclamation of the Scripture matron—"Give me children or I die," finds its counterpart in every woman's bosom ; and however incompatible it may appear, with the superiority of our mental, and moral constitution, however degrading it may seem to a mind accustomed to view human nature only through the dazzling and deceptive medium of the lofty speculations of a refined philosophy, still, it must be acknowledged, that something less purified than the refinements of Platonic sentiment seems necessary for the cement of human affection, which but too frequently droops and withers, when the hopes which, at first, inspired it, exist no more ; and oh ! how bitter must be the unavailing remorse of the man who can look back to his ignorance, or mal-practice as the first cause of a severed affection.

Even, under ordinary circumstances, the accoucheur will meet with much to exercise his patience, and call for no ordinary degree of calmness and self-possession, which a proper knowledge of his business alone can confer : he meets his patient under circumstances, which, however mild, or gentle may be her natural disposition, often render her intractable, unreasonable, and impatient ; vainly imagining that it is always in the power of her physician to diminish her suffering, or abridge the period of its duration ; and, in proportion, she solicits his interference, however premature or unsuitable it may be. Along with her entreaties, he has to encounter the well-meant, but



officious and most vexatious observations and appeals of female friends, who, from personal experience, consider themselves entitled to form a judgment of the case, and of the course he ought to pursue, and persecute him accordingly; but woe to him, if, with a polite but dishonest compliance with such solicitations, he venture upon a precipitate and uncalled for interference, for let him be assured, that even should his precipitancy be attended with success, he will not get the credit of it; even his compliance will be remembered to his disadvantage, his firmness will be doubted, and the confidence to be reposed in him diminished or annulled: and should he fail, or be unfortunate in the result, he may rest assured, that the very persons who urged him, will be among the foremost to exclaim against, and blame him, for his unmanly and temporizing subservience to the opinions of those who were not qualified to influence, or direct him, and whom he should not have regarded.

If there be one quality beyond another, of paramount value, even in the well-educated accoucheur, it is *judicious patience*, under whose influence we shall act “*neque temere neque timide*,” by which, I mean patience, regulated and limited by sound discretion and judgment, which, while it effectually guards us against premature interference, will not induce us to fall into the opposite, but equally dangerous extreme, of undue procrastination; and, without which, no man can honestly discharge his duty to his patient, and to society.

When the time has arrived, at which, patience is no longer prudence, and we *must* interpose, I would earnestly entreat of you to abhor the baneful notion, that haste proves skill, or that rapidity of execution, and true dexterity, are equivalent terms; rather, be convinced, that precipitancy and violence are ever the result of dishonesty, or ignorance.

To my apprehension, an accoucheur, however accomplished, but without patience, and who, on every occasion of inconvenient delay, resorts to the use of artificial assistance, is more formidable than a bedlamite with a drawn sword; the one puts us on our guard, and we may disarm, or overpower him, but the other uses his weapon of destruction under the sanction of his professional authority, and maims, or murders, with impunity, perhaps with applause. Do not suppose, that because you do not use instruments, you may not commit violence; it has been well, and truly said, that the thrust of a hand may be as fatal as the thrust of a bayonet; in point of fact, it is likely to be much more so, since the extent, to which it will tear and lacerate, is an hundred fold greater. I mean to be perfectly serious, when I say, that the man who measures his dexterity, or skill, by the velocity and momentum of his efforts, would shew a sound discretion in changing his profession, and seeking scope for his powers in the construction of steam engines; or he might possibly acquire fame, as a pugilist, but his qualities are awful for an accoucheur.

It is certainly true that our temper is sometimes sorely tried, and we are made to wince, under the stings of unmerited reproach, or

smart with the irritation of insulting inuendo; but even so, I pray you pause, and recollect that the sufferer is torn with agony beyond all human endurance, her heart sick, with hope too long deferred, and her fortitude exhausted, so that she is hardly conscious of what she either does or says; recollect, that she is one of those, whose power is in her weakness, whose strength is in her tenderness; to whom we owe the watchful care of infancy and childhood, and to whom we look, in manhood, for all the dearest consolations of domestic life.

“ The very first  
Of human life must spring from woman’s breast;  
Our first small words are taught us by her lips;  
Our first tear quenched by her, and our last sighs  
Too often breathed out in a woman’s hearing.”

Gratitude alone, then, demands from us the utmost stretch of our forbearance, the utmost exercise of our gentleness, and indulgence, such as we would be sure to experience at her hands, were we the tenant of the bed of pain, and she beside us as mother, wife, or sister; with what unwearied zeal, what anxious solicitude would she watch, to anticipate our slightest wish, with what unfailing patience, through many a tedious day and watchful night, would she smooth down our weary pillow, console our sick-bed sorrows, and like a ministering angel, “cheer with smiles the bed of death.” Do we not daily see this fully exemplified, and with a full devotedness of affection which realizes the picture of unshaken constancy so exquisitely embodied in the words of Ruth to Naomi: “Entreat me not to leave thee, or to return from following after thee; for whither thou goest I will go, and where thou lodgest I will lodge; thy people shall be my people, and thy God my God: where thou diest will I die, and there will I be buried.” Shall we then forget our part, and because our patient is unreasonable, or perverse under agony, shall we be petulant, resentful, or unmanly? Need I answer the question? Need I remind you, how delightful the consolation of knowing, that though heaviness may endure for a night, joy cometh with the morning, and of feeling that we have been instrumental in the delightful consummation which realizes all the mother’s anxious hopes and fondest wishes, and gives her a resting-place for all her deepest, and tenderest feelings, for which, “she remembereth no more the anguish,” even though, to use the strong language of the psalmist “the pains of hell gat hold upon her, and the sorrows of death compassed her around?”

I feel that it would be needless for me to suggest to gentlemen educated as you are, that no consideration of rank or riches should be suffered to weigh against, or disturb the working of our judgment; difference of station makes no distinction in disease, or pain, which, like the sterner influence of death, happens alike to all,

“Æquo pulsat pede pauperum  
Tabernas, regumque tures.”

The duchess or the queen has no immunity, or privilege in labour beyond the ragged beggar; and on our part, we are just as responsible



to God and man for the safety of the unborn innocent of the poor and needy, as for the heir of a sceptre and a diadem.

It is said that when Napoleon Buonaparte was asked by the accoucheur in attendance on Maria Louisa, how he should act, in case of such, or suchan emergency, in the labour of his queen, his stern answer conveyed a magnificent lesson in morality:—"I expect, Sir, that you will treat her, as you would the wife of a shopkeeper in the Rue St. Martin."

This was very noble, when we recollect the circumstances,—it was better, for, it was in accordance with the great law of conscience.

How little can we judge of the importance of the being about to enter life, by the circumstances attendant on its birth. How great may be the destiny of him, whose nativity was cast in misery, whose infancy was steeped in poverty and privation; a cot of bulrushes received the chosen of the Pentateuch, and the Saviour of mankind was cradled in a manger.

Even, if we take only a mere worldly and self-interested view of this matter, every day's experience proves that the kindness shown to the suffering pauper in her wretched hovel, is often acknowledged in the mansions of the rich and noble, when we least expect it. Your school-boy recollections will remind you, that it was in the silent solitude of the forest cave, unseen of man, that the Dacian slave drew forth the thorn from the lion's foot, and relieved his pain; little dreaming of recompense; but what, and where was his reward? In the presence of assembled Rome, and before his emperor's face, while the shouting thousands of the Circus Maximus hailed, with joy, the sentence, that announced to him life preserved and liberty restored; and where, and what shall be his reward, who, in obedience to the command of Him who seeth in secret, but rewardeth openly; does good to the least of all his brethren? his reward shall be conferred in the great amphitheatre of heaven—before assembled *worlds*, in the presence of the King of kings—and his recompense the glorious liberty of the sons of God, and never ending immortality.

Now permit me to make a few suggestions, connected with the nature and study of our branch of medicine.

I know that an idea prevails very generally, that attendance on cases of labour is all that it is required to teach a man to practise midwifery; delivery being but a mere mechanical operation, the moving power of which acts without our assistance, and refuses to submit to our control.

This is one of the many assertions, whose peculiar danger is, that they embody just enough of truth to veil their falsehood.

I think you might as well believe, that the man who had watched for years, the operation of a steam-engine, or the motions of a pendulum, would, therefore, be capable of regulating their action when deranged, or adjusting their parts when displaced, although ignorant of the laws of physics, and of the construction and relation of the several parts of the machine; or that by nightly gazing on the countless glories of the stars, he would learn the laws that regulate their motions.



Be assured, there is a knowledge which you must acquire, before you can hope to practise midwifery, as it ought to be practised, that is, as a science, and before you can conscientiously venture to approach the bedside of a patient, for, at that bedside, you never can acquire it. You all know, gentlemen, that Levret was a man of very extended knowledge and of great practice, and his opinion, on this point, is given in these words: "be not deceived, practice alone is not sufficient to afford such information, for if we are not supported by sound theoretical knowledge, it is in vain that nature is exhibited plainly before our eyes: under such circumstances, we see her under forms which do not belong to her."

1. At the *dissecting table* and in the *museum* you must learn the anatomy of the pelvis, its *form, position, and dimensions*; the relations, structure, and connexions of the parts contained within it, and their communications with those that are externally attached; with this, should be conjoined, an intimate acquaintance with the anatomy of the gravid uterus, and the structure of the ovum.

2. In *your study* and from *books* you must learn the physiology of all these; that is, the uses to which they are subservient, and the functions which they perform, under ordinary circumstances, the character of their healthy action, and the sympathies which they display.

3. In the *lecture room* you should *hear* and *see* explained, the changes made in those anatomical relations and functional sympathies, whether by pregnancy, parturition, or disease; and you should have laid before your eyes, the mechanism of delivery, in the several varieties of labour; while in hospitals, and by other means, you should acquire a competent knowledge of surgery and practical medicine.

When you have treasured in your mind, the information derivable from these sources, you will possess the qualifications which alone can fit you for commencing practice at the bedside; where you will, then, *and not till then*, be prepared to apply to practice, the sound, the unerring knowledge of unalterable principles.

Experience shows that the mere observation of facts, without other modes of investigation, in matters connected with the operations of the animal economy, and especially as connected with our subject, has disclosed very slowly some of the most ordinary, and yet, most important facts connected with midwifery; one proof of which may here suffice; *it was not until the year 1742, that even an approach was made to a knowledge of the proper position and relations of the child's head, in natural labour*; and yet, on that knowledge, depends our power of rectifying malposition, removing difficulties, and effecting delivery under untoward circumstances; and it is gratifying to be able to add, that this important discovery was made in this city, by our countryman, Sir Fielding Ould.

Alike distinct from medicine and surgery, individually considered, midwifery embraces, and requires both, for its effectual and successful practice. As natural philosophy is neither geometry nor metaphysics, yet without a thorough knowledge of both, sinks from the dignity of

a science into the meanness of a technical system ; the natural philosopher, if such he can be called, who is unversed in these, may solve problems and obtain true results, so long as these problems present nothing new, nothing that scholastic forms or collegiate exercises have not already made familiar ; but when he comes to generalize axioms, or from a series of complicated results to draw ageneral inference, he ponders on to little purpose, until, at length, worn out and "weary of conjecture" he makes a desperate final *guess*, and plunges into inextricable and fatal confusion.

The analogy appears so close, as to require no comment ; but if it should, it will be found fearfully set forth in the misdeeds of those, who content with their obstetrical acquirements alone, have forgotten, or neglected, to possess themselves of the advantages to be derived from a proper knowledge of the sister branches of medical science.

Let us suppose a patient, after a short, easy, and natural labour, suddenly seized with violent peritonitis, inflammation of the uterus, pneumonia, or scarlatina, how will a man be prepared to act in these trying emergencies, who has neglected to acquire a proper knowledge of *practical medicine* ? or how is he who is altogether ignorant of *surgery* to act, when his puerperal patient is seized with deep-seated abscess, as, for instance, that which forms in the lateral appendages of the uterus after labour ?

How many days of unnecessary agony will his patient suffer, if he is either, too ignorant to discover its existence, or too unskilful to relieve her with his lancet ? How will he manage a mammary abscess ; a lacerated perineum ; a thrombus, or a vaginal hernia ? how will he treat a fissured rectum, or remove a polypus, or an inverted uterus, by the ligature, or knife ? Oh, but some one will say, he can easily find some one to do any of those things for him : very true ; and with the same facility, he may find some one who would cheerfully relieve him of the trouble of ever again attending his patient, under any circumstances.

But don ot misunderstand me, and suppose that I would discourage you from seeking assistance in cases of doubt, or difficulty ; very far from it ; it is the mark of honesty to avow a doubt fearlessly, and the better informed any one is, the more readily he will do so : none are so vain of their knowledge as the slightly learned, none so reluctant to receive advice ; and it is, not only, wise and prudent, but a bounden moral duty to seek the assistance of those more competent than ourselves, whenever we think the welfare of our patient runs a risk of being compromised, by our depending on ourselves alone. I am only anxious, that by being fully instructed in the different branches of knowledge necessary for your practice, you should be prepared to do the greatest amount of service, with the least necessity for assistance, from others of your fellow-men ; but, how gladly, would I anticipate that every one here, and elsewhere, would feel bound, in every case and in every circumstance of life, to seek for assistance from the great Physician, by faithful prayer, and confident reliance on his support,—



then might he feel assured that the same power which can cause the "barren woman to keep house and to be a joyful mother of children," will be ever at his right hand, to guide and support him, and to crown all his honest endeavours, with all the success which he can desire, or they deserve.

I cannot leave this part of our subject without alluding to the noble Institution within whose precincts we are now assembled; which is, perhaps, the noblest monument of philanthropy ever left by one man's almost unaided efforts, which he prosecuted with an ardour of benevolence unfortunately more commensurate with the lofty and uncompromising spirit of genuine Christian charity, than with his own resources. In 1757, Dr. Bartholomew Mosse completed this grand object of his ambition (the first institution of the kind in the British dominions); but, alas, sunk in the struggle, exhausted in health and means.

Such heroic devotion in morals is little apt to be blazoned forth on the page of history; but in the memory of all good men, will live the praise of him, who with more than the patriot heroism of the Roman Curtius, cast himself into the gulf, for the benefit of the commonwealth; and among the many beneficial consequences which have hence arisen to the public, a most important one is, that there is here established a system of instruction which has, now, for many years, conferred its advantages on the Profession, and, through them, on society at large, and young men are no longer under the dangerous necessity of trusting to learn midwifery by actual practice, and unassisted by any guide.

This institution, in addition to an immense field of observation, in the various forms, and contingencies of labour, and of those diseases and accidents to which women are liable, has, at all times, afforded to its pupils, the unusual advantage of an experienced guide constantly resident within its walls, and, therefore, at all hours ready to impart instruction, and direct the learner in all things belonging to his study. On the qualifications of the gentleman, to whom that important duty is, at present, intrusted, I would willingly expatiate were he not present; but I refrain for many reasons. I know that my spoken eulogy, however high, would only be the imperfect utterance of your thoughts, and my words of praise, you would have already learned from the public voice; I may therefore be permitted to avail myself of the apology once offered by Bishop Sherlock: "I am ill at compliment, and do not choose to be every body's echo."

Permit me, here, to draw your attention for a moment to what appears to me a very important point for consideration, namely, that a large store of theoretical information, even though combined with an extensive observation of facts, may not afford a commensurate supply of practical knowledge.

It is an observation as trite, as it is true, that "knowledge is power," and under no circumstance, is this more remarkably verified than in the profession of medicine; but I fear also that we are, of all



others, the most apt to fall into error on this subject, partly by mistaking the elements of knowledge, for knowledge itself; partly by substituting in our reasonings *names* in the place of *ideas*, adopting theories instead of submitting to laborious investigation, and so preferring a sort of second-hand, or ready-made belief to the more tedious and irksome labour of close examination, or careful induction.

As you collect facts, whether from observation, or reading, recollect, they are only valuable, in proportion as you can draw from them directions for future contingencies in practice, by *reflection, comparison, and arrangement in your mind*: for, as food, however good, or nutritious, will not afford nourishment, except it be healthily digested, and its nutritive portions made our own by a healthy process of assimilation; so, the acquisition of isolated facts, or opinions, no matter how great their number, or how valuable their quality, is not knowledge; nay, the very multiplicity of our ideas, if not carefully arranged, compared, and digested, may be absolutely a bar to it, a mere cause of confusion: "Learning, without knowledge," says the talented author of *Pelham*, "is but a bundle of prejudices; a lumber of inert matter set before the threshold of the understanding, to the exclusion of common sense."

This did not escape the observation of our great modern painter of the human character, Sir Walter Scott, who compares a mind so circumstanced "to the magazine of a pawnbroker, stowed with goods of every description, but so cumbrously piled together and in such total disorganization, that the owner can never lay his hands upon any one article, at the moment he has occasion for it." Knowledge, whether in medicine, or philosophy, depends on the care, with which we examine and compare our ideas, not on the number of them; it is, in the words of Locke, "the perception of their agreement, or disagreement;" "where this perception is, there is knowledge; where it is not, we may fancy, guess, or believe, but we fall short of knowledge." Thus, you perceive that our ideas may be numerous, and yet our knowledge very scanty, nay, our ideas may be clear as it is possible, and yet our knowledge be obscure, or even miserably deficient; and all for want of reflection and examination. I fear this is remarkably displayed in the study of medicine generally, and of our branch of it, in particular. How many among us are fully convinced that the observation of a certain number of cases, with the recollection of their symptoms, and of the remedies suited to their treatment; the attendance on a certain number of lectures, and the perusal of a certain number of books, must necessarily confer on us a profitable knowledge of our subject; but how soon does experience undeceive us, and teach us that we have adopted "a lame and impotent conclusion." Do not for a moment imagine, that I mean to undervalue the benefits arising from attentive observation; very far from it; by such means, and by no other, do we acquire ideas of particular facts of great value, but, on our own mental exertion, in arranging and comparing these,

must depend the *degree* and the *clearness* of the knowledge they will supply us with: "If our memories retain them well, we have indeed the *materials of knowledge*, but, like those for building, they are of no advantage, if they are merely allowed to lie heaped up together, a '*rudis indigestaque moles*.'" By observation and industry, we may have thus, as it were, collected the marble and the cement; by the working of our intellectual powers, must we draw the plan, and raise the structure of the temple of wisdom. Our great metaphysician Locke has expressed himself so admirably on this point, that I cannot avoid availing myself of so powerful an auxiliary. Speaking of the benefits to be derived from reading, he says: "Those who have *read* of every thing are thought to *understand* every thing too; but it is not always so. Reading furnishes the mind, only with materials of knowledge; it is *thinking* makes what we read, *ours*. We are of the ruminating kind, and it is not enough to cram ourselves with a great load of collections, unless we chew them over again, they will not give us strength and nourishment. The memory may be stored, but the judgment is little better, and the stock of knowledge not increased, by being able to repeat what others have said, or produce the arguments we have found in them."

Gentlemen, if I should happen to be heard by any, who feel their spirits damped, and their exertions crippled by straitened circumstances, who are compelled to feel the truth of the maxim,

"Haud facile emergunt quorum virtutibus obstat  
Res angusta domi,"

let me assure them, they need not be discouraged. If they will look to the history of some of the brightest ornaments of our Profession, as well as of others, they will find, that they had to encounter similar difficulties. Indeed, the early difficulties of eminent men form, perhaps, the most instructive and animating portion of their biography. Linnæus records of himself—"Exivi patria triginta sex nummis aureis dives." William Hunter was under the necessity of deferring his third course of lectures for a fortnight, from want of money, to pay for the usual advertisements; and Dr. Cheyne tells us, in his autobiography, that when he settled in this city in 1810, after having been already fifteen years in practice, during six months he received only *three guineas*; but, by the adoption of the course which I shall presently tell you of, in ten years, his professional income amounted to £5000 a-year. Nay, gentlemen, believe me, your days of struggle will hereafter be remembered with interest and pleasure. Memory will scatter sunshine over past moments, which did not illuminate them, when actually present; even the gloomy periods of existence are sometimes reproduced by recollection in an attractive form.

"Forsan, et hæc, olim meminisse juvabit,"

was a part of the argument used by Æneas, to cheer the drooping spirits of his weary followers.



Hereafter, you will have to sacrifice a large portion of your happiness in the pursuit and duties of extensive practice, and when thus swallowed up in a vortex of overwhelming occupation, excluding, perhaps, almost every pleasure except that of adding to your reputation and your wealth, you will look back, with fondness and regret, on the obscurer days, in which you had leisure to enjoy existence ; when life was young, and hope was fresh and buoyant, ever at your side and pointing to promised joy ; and the mind's eye will strain back to trace the outlines of former pleasures, long since buried in the waters of a sea of troubles ; as the traveller seeks in vain to discover, in the bosom of our northern lakes, the sunken towns and towers of a former age.

It is true, that a sentence of one of our greatest English moralists and philosophers, has been received, almost as a dogma, in our profession :—" A physician in a great city," says Johnson in his life of Akenside, "*seems to be* the mere plaything of fortune ; his degree of reputation is, for the most part, totally casual ; they that employ him know not his excellence ; they that reject him know not his deficiency," and this statement is supposed to apply, even more pointedly, to practitioners in midwifery, than to others.

But, be assured, this is a view of the subject as deceptive, as it is gloomy and discouraging : be assured that in this, as in other professions, industry and perseverance, if united with even moderate ability, will enable you to reap a suitable reward. Be assured, that although, in your struggles for advancement, disappointment may endure for a time, if you walk uprightly, honestly and diligently, your hour of triumph and rejoicing will come, sooner or later. No doubt accident may favour one more than another, but if it be true, on the one hand, that " opportunity makes the man," it is equally certain, that the man of information, industry, and discretion can create the opportunity.

If you doubt the truth of these assertions, read the volume of the " Family Library" entitled " The Lives of the most eminent British Physicians," and assuredly you will be satisfied that the disheartening observation of the great moralist must be received as pointing, not to the rule, but to the exception ; and that, generally speaking, in our course of active life, as in others, the long labour of preparatory study, anxious diligence of observation, and conscientious assiduity in practice, are crowned with all the distinctions which generous ambition can aspire to reach. But above all, recollect the encouraging promise, from a source that never failed, that if we are not weary in well doing, " in due season we shall reap if we faint not." But, if you are unwise enough to rest your hopes of professional advancement on anything but industry, and its natural consequence, knowledge, supported of course by unvarying good moral conduct, rest assured you will be bitterly disappointed. Patronage or nepotism may invest a man with place, to which he has no legitimate claim, and for the duties of which he is unfit ; or it may enrich him, for a time, with emoluments wrung



from the institutions of his country, and of which he is undeserving, but can patronage bestow information, or obtain for its minion the confidence of the public, and the approbation of society? Believe me, gentlemen, *it cannot, it never did*. No man ever yet retained reputation except by his own merits. Accident or good fortune may invest the ignorant or worthless blockhead with the robe of authority, or the garb of knowledge, but the hand of experience and public examination soon tears off the borrowed plumes, and bares to public scorn the unfledged fool; like the ass, in the fable, who assumed the lion's skin, but was found to be but an ass, after all.

Let your aim be, to establish your character on the solid pyramid of public opinion, around whose base are the blessings of the poor and needy, and those who have none to help them, and, on its apex, the aristocracy of the land, the smiles of the great and opulent. This is the foundation which will not sink away, when you least expect it, but will stand firm, as a rock, under the feet of him who climbs it by his own meritorious efforts. The public is your only safe and steady patron, and, for this strong reason, it is the interest of all to secure the services of the man of real merit. You will find them astern, inflexible, and generally an unerring tribunal; before whom it is *unnecessary* to plead the cause of active merit, and *useless* to varnish infirmity, or recommend incapacity. Friends may flatter and exaggerate, and enemies may slander and defame, but *the public at large will do justice*, because they are far removed from the sphere of personal feeling, individual influence, and private prejudice. It is to this tribunal, that you must appeal, if you wish for justice.

It was the playful boast of the most brilliant poet of the Augustan age, that no extremes of climate could prevent him from loving and praising his mistress; that, whether in the ice-bound regions of the north, or under the glowing chariot wheels of the tropic sun, his sentiments and feelings would remain unaltered: you recollect his words:

“Pone me, pigris ubi nulla campis  
Arbor æstiva recreatur aura  
Quod latus mundi, nebulae, malusque  
Jupiter urget.

“Pone sub curru nimium propinqui  
Solis, in terra domibus negata,  
Dulce ridentem, Lalagen amabo  
Dulce loquentem.”

But it is the Christian physician's glorious privilege, that wherever he may be, the great object of his love and praise is with him, about his bed and about his path, and directing all his ways,—while there exists no spot on the broad surface of the habitable earth, in which, he cannot exercise his art for the benefit of his fellow-creatures; the lawyer in a foreign country, a stranger to its laws and customs, finds his knowledge foolishness; even the minister of God may fail to interest, and may be unable to impress his divine mission on the

callous heart, or to make his "tidings of great joy" intelligible,—but where is the man, civilized or savage, who will push back the hand stretched forth to minister to his bodily comfort, and relieve his pain. Disease and suffering are of every clime, and almost alike in all, and surely *we* may truly exclaim with the Trojan exile, though in a different sense,

"Quæ regio in terris, *nostri* non plena *laboris*?"

It may be, that there are here, to night, some young men, who, toiling eagerly onwards in the acquisition of professional information, or its application to practice, have with "a zeal not according to knowledge," unhappily persuaded themselves, that all the seven days of the week are but too little for all they have to do; and, so persuaded, use them all alike.

If there be here any such, I would fain say a few words in abatement of the error, into which they have fallen, and endeavour to shew them the *necessity* and *advantages* of keeping holy the sabbath day. The first point, they will learn more appropriately, and far more effectively, from those, whose sacred duty it is, to enforce the commands of God; among which there is none more distinct, or cogent, than "Remember the Sabbath day to keep it holy. Six days shalt thou labour and do all thy work. But the seventh is the sabbath of the Lord thy God."

If now, you are satisfied, that those are the words of the same God who said, "Thou shalt do no murder," which crime, no earthly inducement could prevail on you to commit, and from the very idea of which, you would recoil with horror, on what plea of reason do you acknowledge and respect the one command, but reject and transgress the other?

But what are the *advantages* of keeping the sabbath holy? As sure as God and man have spoken truth, blessings both *temporal* and *eternal* await its due observance.

What says the Lord of all the earth? "If thou turn away thy foot from the sabbath, from doing thy pleasure on my holy day, and call the sabbath a delight, the holy of the Lord, honourable, and shalt honour him, not doing thine own ways, nor finding thine own pleasure, nor speaking thine own words:"

Then what is the consequence?

"Then shalt thou delight thyself in the Lord, and I will cause thee to ride upon the high places of the earth, and feed thee with the heritage of Jacob thy father, for the mouth of the Lord hath spoken it."

Let the sabbath-breaker tell where, *on earth*, he will find a reward like this.

But, viewed even within the narrow limits of personal or professional advantages, my firm conviction is, that a due observance of the sabbath accelerates, instead of retarding, the accomplishment of all the legitimate and most desirable objects of our ambition, and saves time, instead of wasting it.

It is a universal law of nature, that there should be certain alternations of activity and repose, labour and sleep, day and night; and in proportion as any man acts in accordance with this law, he will do what he has to do, more efficiently, and continue longer equal to the necessary efforts of both mind and body.

I may here be permitted to illustrate the apostrophe of the man of Uz, "Ask now the beasts of the field, and *they* shall teach thee," by calling your attention to a curious and interesting fact, stated at the last meeting of the British Association by Mr. Bianconi, as one of his reasons for not working his horses on Sunday: "I found," said he, "after several years' experience, that a horse would travel eight miles a day, on six days in each week, for a much longer time, than he would travel six miles a day, every day in the week." That is, that 48 miles a week would impose less fatigue, with rest on Sunday, than 42 miles a week, without any day of rest.

I am satisfied, we have but to change the name, and that the same statement might be made, with perfect truth, of man, and with this important addition, that the repose of the sabbath not only refreshes and restores his physical powers, but that the soothing influence of its holy duties spreads a refreshing dew over his exhausted mental faculties, by which they are rendered more clear, active, and vigorous for the duties of the coming week,—thus, God works secretly for our good, and shall we oppose him?

But you may ask, have we any evidence of all this before us, *among our fellow-men*, and on satisfactory authority?

To this, I will answer by statements derived from two sources, well calculated, as I conceive, to make a forcible impression on your minds in reference to this subject.

The one is furnished by a medical man actively and successfully engaged in practice, and the other is extracted from the life of an eminent lawyer and judge.

The former, I shall now read to you, as written by himself:

"When I was a young man," he says, "just beginning my profession, I was very industrious and zealous in my attention to its duties. I neglected nothing which I thought, *at that time*, would best promote my advancement, forgot nothing that appeared likely to conduce to success, but I did totally neglect and forget Him who has said: 'them that honour me, I will honour.' I entirely forsook public worship, never went to church, partly, because I preferred devoting the time to professional reading at home, or to some occupation connected with my profession; partly because I indulged in the silly and sinful affectation of wishing to appear so busy, that *I had not time to go to church*; and partly, because I thought, that by remaining at home, and in the way, as it is said, I would be more likely to have the advantage of chance calls to patients.

"In this kind of sordid, slavish, and sinful devotion to business I continued for some years, my health gradually giving way, and my mind always in a state of feverish anxiety, until at length I was



visited with deep affliction and a severe illness, *which were to me, the beginning of blessing and happiness.* By God's grace and goodness, my eyes were opened, and I saw clearly the enormity of the course of life I had been leading, and was, by Him, enabled to change it; and now, for some years, in addition to private prayer and family worship, morning and evening, I have never failed, except when actually detained at a patient's bedside, to attend the services of the Church on Sunday, both morning and evening, so that, although in full business, I think I might say truly, that I am not absent three times in a year; my mind is tranquil and happy, my practice greatly increased, and I find that I can accomplish more, in the six working days of the week, without fatigue, than ever I did, when I profaned the sabbath; on which day, I have long made it a rule, not to open a professional book, nor read any thing except works suitable to the Lord's sabbath.

“Let me add, in conclusion, that while I trafficked with the devil for business on Sunday, it constantly struck me as singular, and I now remember it with pleasure, that in no instance that I can bring to recollection, did I obtain the chance advantages, on which I so wickedly speculated, in misusing and misspending the sabbath; and on the other hand, I can say with perfect certainty, that in *no single instance* have I ever been obliged to neglect a patient, or *omit any necessary duty*, nor have I ever sustained the slightest inconvenience, or loss, by my attendance on public worship.”

Secondly, that distinguished ornament of the English Bench, Lord Chief Justice Sir Matthew Hale, thus speaks: “I have ever found, by a strict and diligent observation, that a due observance of the duty of Sunday has ever had joined to it, a blessing upon the rest of my time; and the week that has so begun has been blessed and prosperous to me: and, on the other side, when I have been negligent of the duties of this day, the rest of the week has been unsuccessful and unhappy to my own secular employments; so that I could easily make an estimate of my successes the week following, by the manner of passing this day. *And I do not write this lightly, but by long and sound experience.*”

Now Gentlemen, do not mistake me, or suppose that I intend to advance any thing so monstrously absurd, as that you should neglect your necessary and indispensable professional duties to your patients on the sabbath day,—far be any such idea from me. You have the authority of Him “who spoke as never man spoke,” that it is lawful “to do good and to heal, on the sabbath day,” as he did himself, for, to use his own words, “the sabbath was made for man, and not man for the sabbath.”

It is not against the legitimate use, but the misuse and desecration of it, that I have ventured to warn you.

Gentlemen, it is one of the painful distinctions of the profession of medicine generally, and in our department of it especially, that we have no time, on which we can calculate as our own; the hours of rest, or

meals, or social enjoyment afford us no immunity from interruption ; emergencies, and those often of the most urgent and important kind, come upon us, when we least expect them, and for which therefore no medical man should ever be unprepared or disqualified, seeing how imperatively they may require a steady hand, an acute eye, and a clear unclouded head, all which may be essential to the *welfare*, perhaps to the *life* of those intrusted to our charge.

Let us then take care, that the public shall have cause to repose in us, that entire confidence which Philip of Macedon felt in the vigilance of his general Parmenio, when, at the festive board, even with the enemy arrayed before him, he exclaimed to his guests, “ Come, let us drink, my friends, we may do it with safety, for Parmenio *never drinks.*”

And if there have been those who boasted that they prescribed as well when drunk as when sober, while we must suppose that they knew themselves best, and formed a correct estimate of the mode in which they acquitted themselves in these different conditions, it must be obvious, says Percival, “ that whether we consider the matter physically, or logically, their boast amounts precisely to this, and no more, that they prescribed no better when they were sober, than they did when they were drunk,” which is surely no great subject of congratulation, nor likely, if true, to redound to their reputation, or advance their success.

There is no branch of medicine which brings the practitioner into so close and intimate a relation with the most delicate feelings and circumstances of society, as ours, none which affords so frequent an opportunity of receiving confidence and exercising discretion—many occasions occur in which the alternative between domestic happiness, or disunion and alienation of affection rests upon the proper silence and discretion of the accoucheur.

In the course of practice many instances will be presented to you, in which the good and virtuous have declined, for a moment, from their happy and exalted state ; can there be imagined any act more ungenerous and base, than the idle or mischievous levity of a professional man, who, by his silly babbling, lifts the veil from off the only stain on an otherwise pure and spotless character ? Or, it may be, that circumstances have arisen, which, although in no wise faulty or reprehensible in themselves, may, notwithstanding, if disclosed to others, sow the seeds of suspicion and discord ; while he who thus offends, may rest assured, that he has forfeited, most probably for ever, the good opinion of the parties concerned. Nothing is more acutely felt, or so certainly resented, as a breach of professional confidence.

“ Secrecy,” says the celebrated Dr. Gregory, “ is particularly requisite where women are concerned. Independently of the peculiar tenderness with which a woman’s character should be treated, there are certain circumstances of health, which, though in no respect connected with her reputation, every woman, from the natural delicacy of her sex, is anxious to conceal ; and in some cases, the concealment



of these circumstances may be of consequence to her health, to her interest, and to her happiness."

There is another kind of discretion and honourable dealing, the want of which has been too often complained of, and it is to be feared, with too much reason; I mean that due regard and kind consideration for the character and feelings of those who may be associated with us in attendance, or who may have preceded us in the treatment of the case.

Under such circumstances I would fain impress upon you this truth, that *the best means ever any man adopted to advance his own interest, effectually and permanently, is to be tender of the reputation, and considerate for the interest of others.* There is no surer proof of an honourable mind and conscious integrity of purpose, than a readiness to construe liberally the acts of others; to make allowances for defects, which, after all, may be only apparent, and to palliate errors in others, as far as that can be done consistently with truth, and a due regard to the welfare of those committed to our care. As, then, we value our own characters we should be tender of that of others. It is surely wretched architecture to attempt to build a reputation on the crumbling remains of that of another. What can be expected of such a structure, but that it will tumble about the ears of the builder, and perhaps bury him in the ruins. Rest assured, that however secretly, or cunningly, any one may manage, "*ambiguas spargere voces,*" the uncharitable insinuation will be disclosed; for such things, stone walls have ears, or, to use the language of Solomon, "*A bird of the air shall carry the voice, and that which hath wings shall tell the matter.*"

Be assured, sooner or later, those who follow this unworthy course will experience the truth of the Persian proverb, which says, that "*Curses are like chickens, and always come to roost at home:*" and are not insinuations and detractions some of the worst curses of society? Be assured of this, that the ladder, by which, you can most certainly and safely mount to a high reputation is the good opinion of your professional brethren.

Dr. Cheyne, whose memory is still cherished with reverence by all who knew him, has bequeathed us a memoir of himself well calculated to arrest our attention, not only for the valuable truths it contains, and the important lessons it conveys, but for the unpretending simplicity with which it is written, and the spirit of pure Christianity with which it is adorned. In this memoir, speaking of the principles of action he adopted, and the means which first led to his advancement, he says: "*I endeavoured to become acquainted with the characters of those who moved in the highest rank of the Profession, and to discover the causes of their success, and I ascertained that, although a man might acquire popularity by various means, he could not reckon upon preserving public favour, unless he possessed the respect of his own Profession; that if he would effectually guard his own interests, he must, in the first place, attend to the interests of others;*



hence, I was led carefully to study, and liberally to construe that part of medical ethics which regulates the conduct of physicians towards each other;" and again, having attained to the utmost limit of success, he observes: "by a good arrangement, punctuality, attention to the interests and feelings of my professional brethren, and by prudence, the means which had apparently led to my advancement, I now tried to avoid those reverses to which professional life is ever subject;" and many here know the result, that when he left us in the autumn of his days, when "his way of life had fallen into the sear, the yellow leaf," he took with him "golden opinions from all sorts of people"—and possessed, in rich abundance, what the guilty monarch wept to anticipate the want of—

"As honour, love, obedience, troops of friends."

And here, I feel persuaded, that it has already occurred to many of you, that it were only necessary to change the name, and all these sentiments of admiration and regard would equally apply to another, who just now, "after life's fitful fever, sleeps well," and if I speak of one who, after a long life of honour and utility, carries with him to the grave, the affectionate respect and reverence of all who knew him,—one so entwined with our best and tenderest feelings and recollections, that the poet's exclamation will not appear extravagant:—

"Ah quanto minus,  
Versari cum aliis, quam meminisse tui."

When, I say, I speak of such an one, I feel that your hearts anticipate the application of my words, and murmur the name of COLLES.

*December 4th, 1843.*

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PART I.  
ORIGINAL COMMUNICATIONS.

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ART. VII.—*Contributions to Midwifery*, No. V.—*On the Influence of Ergot of Rye on the Fœtus in Utero*. By THOMAS EDWARD BEATTY, M.D., M.R.I.A., Fellow of, and Professor of Midwifery to the Royal College of Surgeons in Ireland; Physician to the City of Dublin Hospital; Consulting Accoucheur to the South Eastern Lying-in Hospital; Vice-President of the Dublin Obstetrical Society; and Honorary Member of the Obstetrical Society of Edinburgh.

[Read before the Dublin Obstetrical Society.]

It is not my intention on the present occasion to occupy the time of the Society by any very lengthened observations on the use of the ergot of rye; but I wish to lay before the members an account of some effects of this drug, which during an extensive employment of it I have observed, and of which I have not been able to find any notice in the authors who have treated of the medicine. Since the revival of the use of the secale cor-

nutum by Dr. Stearns of New York, up to the present time, a variety of conflicting opinions have been entertained respecting its value as an obstetrical agent. Some authors of the highest repute have declared its utter inutility and incompetence to excite uterine action, no matter how eligible the circumstances, or how carefully the dose has been apportioned. Another class, of equally high character, is found to attribute the most rapid and energetic effects to its employment; so much so, as to lead to its denouncement as too violent an agent for obstetrical purposes, appearing to be injurious to the child at all times; its impression being destructively transmitted from the mother to the infant; in some instances even involving both in the same sacrifice. A third and numerous class of high authorities is recorded as maintaining an opinion equally at variance with the truth as the two preceding, viz. that the ergot may be always given with advantage, the safety of the mother or of the child being never endangered. It would be tedious and misplaced to quote the authorities above alluded to on the present occasion; and moreover it is unnecessary to do so, inasmuch as they will be found in Mr. Wright's elaborate and valuable prize essay on *Ergot of Rye* in the fifty-third volume of the *Edinburgh Medical and Surgical Journal*.

Viewing this discrepancy of opinion among authors of acknowledged celebrity, it becomes an object, not only of theoretical, but of practical interest, to endeavour to search out the cause or causes which have been instrumental in producing such an effect.

When we find such names as Chaussier, La Chapelle, Desormeaux, Gardien, and Capuron in the list of those who maintain the inertness of the *secale cornutum*, if we had not practical experience to the contrary, we would be inclined to bow to such high authority, and agree with the latter, that "it is a drug which it is requisite speedily to expunge from the list of the *Materia Medica*." But when we have witnessed the efficacy of the medicine in numerous instances, and find its character sub-



stantiated by the united experience of its many successful employers, we are disposed to look for some reason for its failure in the hands of the practitioners above mentioned. Two causes of such a failure may be suggested : first, the administration of the drug in inadequate doses; second, the inferior quality of that which was employed. It is not improbable that the French authors, whose names have been just mentioned, were disposed to use the ergot with great caution, owing to the circumstance of the drug being at that time considered in France and Switzerland as a highly noxious substance, and capable of producing fatal effects in those to whom it was administered. This may have led them to employ it in quantities too small to produce the desired effect upon the uterine fibres. But it is more likely that the second cause just alluded to may have led to the failure, for it is owing to investigations conducted more recently that we have become aware of the perishable nature of the medicine, and the readiness with which its peculiar virtues are destroyed. Ignorance of this fact may have led to the administration of the ergot in an inert condition, owing to its having been deteriorated by keeping. There is scarcely any medicine that spoils more quickly, and requires more care in its preservation, than the one under consideration ; and even in the present day, with all the knowledge of its properties which we possess, I have reason to know that it is at times employed in a state in which it is utterly devoid of its peculiar properties, and completely inert as an obstetrical agent.

Some time ago I was in attendance on a lady at a short distance from this city, in whose case I wished to administer the ergot. Having recently used the dose, which I habitually carry about me, I sent a messenger to a very respectable apothecary living in the adjoining suburb, to whom I wrote a note, requesting that if he had any good and fresh ergot he would send me some, and if not that he would send on the messenger to my own house for it. In a short time the man returned with a paper from the apothecary, on opening which I found a black,

damp mass, more like wet turf-mould than any thing else. If I had used this in ignorance of its being spoiled, of course disappointment would have been the consequence, and my faith in the power of the drug would have been shaken.

The second objection, viz. that the ergot is at all times destructive to the life of the child, has probably arisen from the employment of the medicine at improper times. Thus recourse has been frequently had to its aid in cases of difficult labour arising from mechanical opposition to the exit of the child. In such a case the destruction of the infant is almost sure to follow, for the delay which necessarily occurs between the administration of the dose and the expulsion of the head is almost certain to produce fatal results.

In a former communication\* I have stated that I consider a delay of two hours after the ergot has been taken, as sufficient to cause the death of the child. I will revert to this subject in a subsequent page, at present I will only observe, that persons who employed the drug under circumstances like these must have been led to form the opinion that it was highly dangerous to the life of the infant.

The third class of authors above alluded to have formed far too sweeping an opinion of the merits of this medicine, when they state that it may be always given with advantage; the safety of the mother or of the child being never endangered. This is a kind of praise most likely to do mischief, and damage the reputation of a valuable remedy, by inducing others to employ it under circumstances in which it is quite inadmissible.

From a very extensive use of the ergot I am quite prepared to maintain that none of the three opinions is correct, but that the truth lies between them. The medicine, when fresh, and carefully preserved, is in fact one of great energy, and influences not only the mother but also the infant. It requires to be used with great discretion, for while it will in one case effect the de-

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\* Dublin Medical Journal, vol. xxi. p. 361.

livery of a living child, it will in another destroy the life of the child before birth, or operate so injuriously upon it as to cause its death shortly after it is born; or produce a peculiar effect on its nervous system which I have observed, and will presently describe, but which I do not find described in any work that I have perused.

The difference of effect upon the infant depends upon the length of time that intervenes between the administration of the dose to the mother and the conclusion of the labour. If this takes place quickly no mischief is done to the child; if it be alive when the medicine is taken, it will be born so; but if a delay of even two hours should occur, the probability is the child will be still-born. It is, I believe, generally imagined (and I entertained the opinion myself until lately) that the death of the child is owing to the kind of action excited in the uterus by the ergot, differing from the natural labour pain in this, that after the contraction of the uterus has been excited, no complete relaxation of its fibres takes place; there is an occasional increase in the strength of the effort, but it never relaxes so long as the influence of the ergot continues. It is, as it were, one continued pain, at times greater, but never entirely ceasing. The effect of this continued contraction of the fibres of the uterus upon the great blood-vessels which traverse its walls to reach the surface of the placenta, must be to intercept the circulation to a certain degree. Now although this cause contributes, no doubt, in some cases to produce unfavourable effects upon the child, I am disposed to think that it is not the only cause of fatal mischief in all, but that in some there is a noxious influence exerted on the nervous system of the infant, producing results of different degrees of intensity, and that these effects vary from the death of the infant, to certain spasmodic affections of the muscular system after birth. A few cases from my note book will serve to illustrate the position I have here taken up. I will first read some in which the medicine was given with advantage to the mother and safety to the child.



CASE I.—MRS. C., fifth pregnancy. Her former labours had been natural and easy, occupying on the first occasion fifteen hours, on the second, nine hours, on the third, six hours, and on the fourth, five hours. On this occasion the pains were from the beginning weak, and slow in returning, and after the head had come down to rest on the perineum they became more faint, and appeared insufficient to expel it. The soft parts were well relaxed, and a little more energy in the uterine action was all that seemed requisite to insure a speedy delivery. Nineteen hours had elapsed since the labour commenced, and finding the pains diminishing, rather than increasing in strength, I gave my patient half a drachm of the ergot, and in ten minutes after she had swallowed the dose, a strong pain came on, which completed the delivery of a live child.

CASE II.—MRS. T., of a pale, delicate habit, and lax fibre, was thirteen hours in labour of her first child. The head was easily passed through the brim and into the cavity of the pelvis, although the pains had not been strong during any part of the process. When the head distended the perineum, the pains subsided in strength and frequency, and although no mechanical obstacle to delivery existed in the soft parts, the labour was arrested by a deficiency of energy in the expelling power. The ergot was given in the same dose as in the former case, and a living child was born in fifteen minutes after its administration.

CASE III.—HON. MRS. A. This lady was confined two years previously of her first child, at which time her labour was only ten hours in duration, but she had very profuse hæmorrhage after the birth of the child. On this occasion labour began at six o'clock, P. M., by discharge of liquor amnii, soon followed by pains. I saw her at eight, P. M., when the pains were trifling, but recurred with regularity every quarter of an hour. They increased until ten o'clock, at which time the os uteri was nearly dilated and soft. Some hæmorrhage now appeared, which continued (although at no time profuse) through the remainder of labour. At eleven o'clock about one-third of the head had

passed through the brim of the pelvis, but the strength of the pains diminished so as to have no effect in its advancement. The patient now complained of a constant pain in the back without any remission, but with an occasional increase in severity. She soon began to experience great exhaustion and sinking; complained of want of air, and cried out to have the doors and windows of the room opened. The pulse continued natural and steady. Some cordials were administered, which had the effect of restoring her. In this state she remained until one o'clock, A. M., when finding no return of true uterine action, the os uteri and external parts being perfectly relaxed, I gave half a drachm of ergot; this was followed in the space of a quarter of an hour by one good pain. I now repeated the dose, which quickly produced energetic action of the uterus. Three pains expelled the child, alive, just twenty minutes after the first dose had been given. The placenta was found lying in the vagina, from whence it was readily removed, without the loss of an ounce of blood. The cord in this case was only fourteen inches long.

CASE IV.—This lady, Mrs. K., was pregnant of her fourth child; all her previous labours had been natural and easy. On this occasion the pains were unusually few and feeble, and she was thirty-four hours in slow labour before I was called to her. The membranes had ruptured early, and continued to drain away. I found her walking about her chamber without any pain. On making an examination I perceived the os uteri dilated, and the head nearly resting on the perineum. The pains were now suspended for five hours, at the end of which time I gave her the usual dose of *secale cornutum*. In five minutes after she had taken the medicine the pains returned, at first feebly, but gradually increasing in strength; the child was expelled alive in half an hour.

CASE V.—Mrs. M. This lady was very near dying from uterine hæmorrhage after her first confinement, which took place in the country. This caused her to come to town, and place

herself under my care on the present occasion. Labour pains set in at four o'clock, A. M., and continued with regularity until seven o'clock, when they diminished a good deal in strength. A slight draining of blood now appeared, which having rather increased at eight o'clock, made me uneasy about the delivery of the patient, who was of a very thin and feeble frame, and weak constitution. I prepared the ergot in the usual way, by infusing a drachm of the powder in four ounces of boiling water, and adding some sugar. Of this I now gave her the half, which soon restored the uterine contractions, and in half an hour the head was born. I then gave the remaining portion of the medicine before the shoulders were expelled. The uterus contracted firmly, excluding the child alive, and leaving the placenta in the vagina, from whence it was removed without any further loss of blood.

CASE VI.—Mrs. A.; fifth pregnancy. Her former labours had been easy and natural, and sometimes very rapid. This was the case at her last confinement, on which occasion the child was born before I could reach her house. At the present time the labour was very slow, and protracted. The soft parts were well relaxed, and the head was quite moveable in the pelvis. The only obstacle to delivery seemed to be an inert and sluggish uterus. To rouse the dormant powers of this organ the ergot was given in two doses, at an interval of twenty minutes between them. Labour pains were excited in a short time after the last portion had been swallowed, and a living girl was born in one hour from the administration of the first dose.

Here we find that the duration of labour after the administration of the medicine varied from a quarter of an hour to two hours, and that in all the child was born without any unpleasant effects.

I will now read a few cases in which a longer period than two hours elapsed after the dose was given, and in which the peculiar effects to which I wish to direct the attention of the



Society were observed. These effects are certain spasmodic conditions of the muscles of the whole body, alternating with relaxation or palsy, and accompanied by evidences of derangement of the functions of the cerebro-spinal system. It will be perceived that there is in these cases a difference in the intensity of the affection, in some appearing slighter than in others, but the *kind* of affection will be recognized in all. In an interesting paper by Dr. Catlett\* he notices the tendency of ergot to produce hydrocephalus in the early stage of infantile life, and having detailed five cases in which the death of the infant from this disease took place at different intervals after delivery, he says: "It will be seen, that of the above there are none connected with a first delivery, or any in which the child was subjected to any lengthened or forcible impaction. Is there any warrant from this fact to infer that the ergot had here exerted any specific influence upon the foetal constitution, as alluded to by Dr. F. H. Ramsbotham, independent of the extra-mechanical pressure induced by its action? It becomes indeed a very interesting question, if it be admitted that ergot has an agency in the cerebral disturbance thus set up in the infant economy, to determine in what manner it is effected: whether, as above hinted, it be a purely mechanical effect, or occurring through the medium of direct absorption into the foetal system."

It appears to me that the cases I am about to relate will go a great way towards the solution of this question, by the evidence they afford of a direct poisonous effect produced on the infant before delivery.

CASE VII.—Mrs. N., was eighteen hours in labour of her first child. The pains were weak and ineffective, and at the end of sixteen hours they seemed to diminish in strength and frequency. The os uteri was well dilated, and the child's head nearly rested on the perineum, which was pliable and cool. A dose of ergot was given, and was followed by a second in twenty

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\* Edin. Med. Surg. Jour., vol. lvii. p. 83.

minutes, the first not having produced any uterine action. From this period the pains became more active, but at no time were they violent, and at the expiration of two hours from the administration of the medicine the child was expelled to all appearance dead. The surface of the whole body, as well as the face, was of a deep blue colour, resembling the appearance presented by a child in whom the foramen ovale is open. All the muscles were in a state of rigid contraction; so much so, that the limbs remained straight, and could be with difficulty bent. The fingers were straight, with the exception of the last phalanges, these were bent, and crooked downwards, being firmly fixed in that position. No effort was made at inspiration. The cord was now divided, and blood was allowed to flow from the cut extremity, which it did slowly. A warm bath was provided, and pulmonary insufflation was employed, and at the end of fully half an hour my exertions to restore animation were successful. The child breathed, but the rigidity of the muscles continued for a long time after it showed signs of life, and when the tonic spasm relaxed it was only for a short period, and was quickly succeeded by general convulsions. This condition of alternate convulsion and relaxation continued without intermission for three days. During this time leeches were applied to the temples, and the head was extensively blistered. The spine was also blistered from the occiput to the middle of the back, and the usual antispasmodic medicines were given by the mouth and rectum. By degrees the intensity of the convulsion appeared to subside, and the interval of relaxation became longer, the strabismus, which had been very great, now disappeared, and the child finally recovered.

CASE VIII.—Mrs. P. This was a case of placenta presentation, to which I was called by Mr. Murphy of Rathgar. The hæmorrhage had ceased when I saw the lady, but I found her very much exhausted, complaining of noise in her ears, with a small, thready pulse at 120. On examination I found the os uteri dilated to the size of a half-crown piece, with an edge of

the placenta encroaching on its area towards the left side. There was no pain at this time, although there had been some in the course of the morning. The examination reproduced hæmorrhage; I immediately plugged the vagina, and gave her half a drachm of ergot, which was repeated in a quarter of an hour. Pains soon came on, weak at first, but regular; they increased so much in an hour after the medicine had been given, that I removed the plug, and found, as I expected, the os uteri more dilated, and the membranes tense, and protruding at each pain. I now ruptured the membranes, and from that moment all hæmorrhage ceased. A warm cordial draught of wine and water was administered to the patient. The pains increased in power, and at the expiration of two hours and a half from the time the ergot was given, a girl, apparently still-born, was delivered. This child presented precisely the same appearances as those described in the last case, but it required a perseverance of two hours' duration before it could be considered safe to relinquish our attention to it. At length it was quite restored, the spasmodic state of the muscles relaxed, and no convulsions followed.

CASE IX.—Lady N. This was the third time I was called to attend this lady; her two former labours had been natural. On this occasion, after labour had been well established for four hours, the pains ceased entirely, and did not return until after waiting eight hours, during which time stimulating injections and frictions to the belly, &c. were employed. Finding there was no sign of the return of uterine action, I gave a drachm of the ergot in divided doses. The uterus was soon thrown into action, and in three hours the child was born, blue and stiff, and insensible. After great exertions respiration was established, but the child had severe convulsions, which lasted for forty-eight hours after its birth. These subsided, but left the child in a state resembling paralysis, with occasionally a convulsive motion of the muscles of the face and limbs, and fixed strabismus. No treatment seemed to have any effect upon



this condition. Twenty days after its birth the following report was taken: "This child has remained in a state of insensibility up to the present time; the strabismus has lately disappeared, but it seldom opens its eyes. The limbs are apparently powerless. It makes no effort to suck, but it swallows breast-milk with difficulty when put into its mouth. The difficulty is increasing. The bowels act naturally." In this state the child lingered on until the twenty-fifth day, when it died.

CASE X.—Mrs. M. This lady was in labour of her third child. Her previous labours had been very slow. I saw her after she had been ten hours ill on the present occasion. The waters had been discharged, the os uteri was quite dilated, but the head had not entered the pelvis. No pain having occurred for an hour after my arrival, I gave her the ergot as usual. Its operation was very tardy, it did however excite the uterus to act, and in two hours and a half after its administration the child was born livid, rigid, and dead. No resuscitation could be effected in this child.

CASE XI.—Mrs. K. This lady's labour began at midnight, by rupture of the membranes, without pain. It was her eighth pregnancy. On my arrival I found the os uteri dilated to the size of a shilling, and the head presenting. Matters remained in this state for nine hours, when a sudden and copious hæmorrhage took place, and flowed with great rapidity. I immediately gave the ergot, and plugged the vagina. Pains did not come on for near an hour, and then were weak, but continuous. The child was born in three hours after the medicine was given. It was dead, livid, and rigid; the hands were firmly clenched. No success attended our efforts at resuscitation.

CASE XII.—Some time ago I was called in consultation with Sir Philip Crampton to see a child, then three years old, and labouring under a very remarkable spasmodic disease. When the child was carried into the room by its mother it appeared as if every muscular fibre in its body was in a state of paralysis. The limbs all hung loose and powerless; the head

fell about by its own gravity, unsupported by the muscles of the neck. The countenance was idiotic. While we looked at the child, this state of utter flaccidity was slowly changed into one of spasm of every muscle of the body. The limbs were contracted into the most grotesque forms, the back was forcibly bent backwards, and the head was extended and flexed, and rotated, and all these motions were performed slowly and in succession. After this paroxysm of muscular action the whole child relapsed into its former state of flaccidity and helplessness, and this scene was repeated several times while it remained in the room. We were told that this condition had continued since its birth. I was so much struck by the resemblance this condition bore to that in which I had seen the children above described, that I inquired from the lady what was the nature of her labour when this child was born, and I learned that it had been long and tedious, and that she had got ergot of rye to quicken the pains. The child was still-born, great difficulty was experienced in resuscitating it, and it had never been free from the alternate spasm and palsy since its birth.

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In the cases just recorded, the condition of the infants was very unlike that of still-born children delivered under ordinary circumstances, and when no ergot had been administered to the mother. *The distinguishing characteristics are, the general lividity of the surface, the universal rigidity of the muscular system, producing the stiffened limbs and clenched hands in those infants in whom life was extinguished; and the remarkable kind of alternating spasm and palsy which supervened in those that were resuscitated.* The nearest approach to this state in new-born children, and that which most resembles it is, the condition in which children are born dead, with symptoms of congestion of the cerebral vessels, in whom, it is true, we find the countenance suffused and livid, but the peculiar affection of the muscular and nervous systems is wanting. Children presenting this appearance of congestion are usually born after

difficult labour; but in the instances above detailed this was not the case, some of them were tedious, but none of them difficult.

That the *fœtus in utero* is capable of being influenced by the circulating fluids of the mother, is proved by the well-known fact, of the communication of syphilis, small-pox, &c. to the unborn child; and that substances taken into the stomach of the mother can affect the infant, is shown by the experiments of Majendie,\* who found in the fœtus of animals the odour of camphor, and the colour of madder, with which he had fed the mothers. It is still further established by the case reported by M. D'Outrepoint,† of a fœtus poisoned by opium taken by the mother.

Admitting this point to be established, it remains to be seen whether the effects described above, and imputed to the direct agency of the ergot of rye, bear any resemblance to the effects produced by the introduction of this drug into the circulation. Upon this point we have very satisfactory information in the elaborate essay of Mr. Wright, already alluded to. Before proceeding to recount the results of his experiments, he takes notice of some of the epidemics of *spasmodic ergotism*, caused by eating bread made of rye containing a large portion of ergot, which visited different parts of the Continent during the last century. This disease almost devastated Freybourg, and overran many of the Cantons of Lusatia, Saxony, and Sweden. According to Videllius, the patients were attacked with spasms and convulsions, accompanied with violent pains, which were said to equal those of luxation, and to be similar in their type. In some instances the patients became lethargic, and when recovering from such state gave respectively signs of stupidity, intoxication, and extreme lassitude, after which the fit subsided for a time. But there generally remained vertigo, *tinnitus au-*

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\* Velpeau de l'art des accouchemens, p. 196.

† Revue Medicale, t. iv. p. 121.



*rium, nebulæ oculorum*, rigidity of the members, and excessive feebleness.

In 1722 Silesia, in 1723 the environs of Berlin, and in 1736 Wirtemberg, in Bohemia, sustained the disastrous effects of ergotism. The disease commenced with a disagreeable sensation of tingling or itching in the feet; a violent cardialgia then came on, and the disease ascended to the hands and the head. The pains in a short time subsided, the head became heavy, and vertigo prevailed, the eyes appearing to have a thick mist before them. The fingers and hands were so spasmodically contracted that no force could straighten them, and the pain was described as equalling that of luxation. Some of the patients became totally blind, and others had double vision. The memory also failed, the conversation was wild and unintelligible, and the movements staggering and awkward. Some became maniacal, some melancholic, and others comatose. The disease was usually accompanied with opisthotonos. Of 500 patients, 300 infants perished, considering as such all under five years of age

Burghard gives an account of a convulsive epidemic which raged in the Canton of Silesia. The patients were the subjects of excessive spasms, which convulsed the extremities, and the head, eyes, and lips in particular, attended with an aberration of reason which no medicine could restore. Those who died showed, previously to dissolution, a sort of paralysis, which degenerated into apoplexy. Such as were fortunate enough to recover laboured for some time under excessive debility, particularly of the joints, stiffness, and even immobility of the limbs, enfeebled intellect, &c.

This short abstract shows the convulsive character of the disease induced by the use of ergot as a matter of food, and points out the brain and spinal marrow as the organs principally under its influence.

Let us now inquire into the effects of this drug when introduced directly into the circulation; and here I may remark that

the *fœtus in utero*, with respect to the introduction of noxious matters into its system, is circumstanced similarly to animals on whom we experiment by injecting fluids into their veins, for if the poisonous material does reach the fœtus, it can only do so by the route of the umbilical vein.

*Exp. 1.*—Mr. Wright injected a strong infusion of ergot into the jugular vein of a dog, who cried and struggled violently on receiving it, the urine flowing in a full stream, the pupil dilating immediately, the pulsations of the heart being too rapid to be counted. In four minutes its action was much diminished in force and frequency, and general muscular flaccidity prevailed, with slight quivering of the whole frame. In another minute the heart beat with singular rapidity and force, during which complete opisthotonos came on. After the lapse of another minute and a half the dog cried in a plaintive tone, the heart beat slowly and laboriously, the breathing was remarkably slow and profound, and under these circumstances the animal died, in exactly nine minutes from the period of injection.

*Exp. 2.*—Another dog was treated in a similar way, but when only half the quantity was injected excessive spasmodic action ensued, with dilatation of the pupil and discharge of fæces. In three quarters of a minute the convulsions had ceased, and there were only to be observed the most perfect helplessness and flaccidity of the limbs, with a quick and feeble pulse. This state continued through the further space of half a minute, when very slight tremor of the muscles of the hind and fore legs succeeded, accompanied with a drawing down of the lower jaw and perfect emprosthotonos. The motion of the heart was now very slow and intermittent. The emprosthotonos, with an occasional convulsive sigh, continued until four minutes and a half from the commencement, when all signs of life were gone.

Several other experiments were made by Mr. Wright, with different quantities of the infusion, and all produced results differing in intensity, but similar in kind.

The question now arises, does the blood of the mother be-

came impregnated with the noxious properties of the ergot? This point has been also settled by Mr. Wright, who has proved that the oil of ergot (upon which the peculiar action of the drug seems to depend) is present in the blood of animals who have taken the medicine by the mouth. He detected the oil in the blood of a dog to whom he had given the powdered ergot; and he gives an account of the method pursued, which it is not necessary to mention here, but he has established the fact by his investigations, and we are thus enabled to comprehend how the influence of the drug can be extended from the mother to the unborn child.

It might appear strange at first sight, and difficult to understand, how a medicine taken in the usual medicinal doses, and with apparent impunity, by the mother, shall nevertheless act injuriously on the *fœtus in utero*. But the difficulty is, in a great degree, removed, when we consider, first, that the system of the mother is very generally acted on by the ergot, though not to any injurious extent; and secondly, the great susceptibility of infants to the action of narcotics. That the maternal system is more or less influenced by the ordinary doses of the ergot, is shown by the remarkable depression in the pulse, which so constantly follows the administration of the drug; the rate of the pulse often falling twenty beats in the minute; and in some instances dangerous comatose symptoms have ensued. This, coupled with the fact above alluded to, that infants are peculiarly liable to be dangerously affected by very minute doses of narcotic medicines, enables us to comprehend how the *fœtus* may be injured by a poisonous matter circulating with the blood of the mother.

It is plain that the longer the time that elapses after the medicine has been taken into the stomach of the mother, the more certainly will its noxious principles be absorbed and mixed with her blood, the more certainly also will these principles be transmitted to the *fœtus* by the constantly arriving current of blood



through the umbilical vein, and the more likely will the foetus be to suffer from their effects.

From these observations I think we are justified in coming to the conclusion, that the administration of ergot of rye to a woman in labour is attended with danger to the child, whenever a time sufficient for the absorption and transmission of its noxious properties elapses before the child is born; and from the cases above stated I am inclined to place two hours as the limit of safety, and to consider a prolongation of labour beyond that period as perilous to the infant.

It would appear that the *degree* of effect produced differs with the time that elapses between the exhibition of the dose and the birth of the child. In some we find spasm and lividity, with a capability of being perfectly restored to life; in others resuscitation was followed by convulsions terminating in idiotcy, with alternate spasm and palsy. In others the convulsions were followed by death at a remote period; and in others the life of the child was completely extinguished before birth.

Two practical deductions may be drawn from these observations,—first, that the ergot should never be given in any case where there is a likelihood of the labour lasting more than two hours after its administration, except when it may be employed to secure the life of the mother, as in the cases of placenta presentation and accidental hæmorrhage above quoted—(Cases VIII. and XI.) ; and secondly, that if we find delivery is delayed to two hours, we should resort to artificial assistance to save the life of the child.

ART. VIII.—*Two Cases of Scirrhus of the Pancreas, with Observations on the Diagnosis of Affections of that Gland.*

By FRANCIS BATTERSBY, A. B., M. B., T. C. D.; Fellow of the Royal College of Surgeons in Ireland; one of the Medical Attendants of the Dublin Institution for the Diseases of Children, and of the Sick Poor Institution; and formerly Demonstrator of Anatomy in the School of Medicine, Park-street.

[Read before the Surgical Society of Ireland, March 30, 1844.]

THE complete disregard of the pancreas by the ancient fathers of medicine is strongly contrasted with the rather exaggerated importance attributed to it by the writers of the sixteenth century, who evidently, as Dr. Abercrombie remarks, did not found their opinions on any very accurate observations. Highmore considered it the seat and source of apoplexy, palsy, and hysteria; while Schenckius, Fernelius, and Riolanus extended its influence to almost all the diseases of the human frame.\*

At the present time, of all the organs in the body there is, perhaps, not one whose diseases are so little attended to, or thought of, as those of the pancreas, and this arises, partly, from the symptoms during life connected with its affections being so obscure and ambiguous as to be generally overlooked or misinterpreted; and, partly, because, as Lawrence remarks,† “morbid changes in it of any kind are extremely rare.” It becomes therefore a duty to record every instance of the latter tending to throw light on its pathology, for the history of which Abercrombie says,‡ “facts are wanting;” and it is with this view I beg permission to exhibit to the Surgical Society the morbid parts concerned in the following case, which, in some respects, will be found not undeserving of attention.

On September 3, 1843, I was requested to visit Mrs. M., a

\* Edinburgh Med. and Surg. Journal, vol. xlv. p. 86; and vol. xxi. p. 243.

† Medico-Chirurg. Transactions, vol. xvi.

‡ On Diseases of the Stomach and Abdominal Viscera.

lady, aged between 55 and 60 years. She had been remarkable for her *embonpoint*, and had always enjoyed good health until two years previously, when she became subject to severe pains in the back, which affected also the shoulders and arms, and were supposed to be rheumatic. After the lapse of a year there was discovered in the epigastric region a deep-seated pulsating tumour, about the size and shape of an orange, having a regular diastolic enlargement synchronous with the pulse, and a well-marked bruit de soufflet. Her disease was in consequence considered to be aneurism of the aorta, by (I have permission to state) Mr. John Hamilton, Surgeon to the Richmond Hospital, who did not till after a most careful examination arrive at this conclusion, warranted by the foregoing facts, which I have given in his own words. She also suffered from fluid eructations, and an obscure, deep-seated pain.

In the course of a month or two this tumour subsided, and the pulsation ceased. A new set of symptoms then arose: the uneasiness extended over the abdomen, and the stools were passed with pain and forcing, which after awhile became of such severity as to resemble, as she said herself, the pangs of labour.

I found her extremely emaciated. She looked like a skeleton. Her complexion was of a dingy, leaden hue, and the conjunctiva of the eyes was slightly jaundiced. She suffered very much from constant pain and uneasiness in the lower part of the abdomen, which was somewhat prominent and tympanitic, particularly in the region of the cæcum.

There was a marked fullness of the epigastric region, in which was to be felt a deep-seated, solid, and fixed induration, having a flattened surface and a defined outline inferiorly, which ran transversely between the cartilages of the ribs. It was without pulsation, but a bruit de soufflet was audible on the application of the stethoscope over it in the course of the aorta. There was a continued unpleasant sensation in the epigastrium and right hypochondrium, increased by pressure on the swelling,



which seemed to be totally unconnected with the stomach or liver. Constipation invariably aggravated her suffering, and the bowels were seldom moved without the use of lavements (of which she could not receive more than a pint at a time) and aperients; and the passage of the stools was attended with violent straining and intense distress, which drew from her screams, loud and piercing. The stools generally consisted of watery, ropy mucus, deficient in bile; when at all solid the fæces were not thicker than a small sized finger. Her body, whether in bed or out of it, was always in an incurvated posture, bent forwards. She was in a constant state of anxiety and restlessness, never enjoying sound repose for any length of time continuously. Her appetite, hitherto good, was now nearly gone. She used nothing but fluid nourishment in small quantities, since having had, a week or two before, an attack of dysphagia, which had been removed by the application of an opiate plaster over the pit of the stomach, and she still continued to wear a portion of it, of the size of a crown-piece, over the top of the sternum, believing that it kept off any return of the complaint. Even fluids she disliked taking, as their passage, she said, always made her worse. At no time had she been subject to vomiting, but there were occasional eructations of a clear watery fluid, not exceeding a table-spoonful at a time, which she described as being bitter. Her mouth seemed always full of saliva; the tongue was pale and clean; there was no thirst. Pulse 70, intermitting, and variable in strength. The legs and thighs were highly anasarcaous.

She died on the 2nd October, little alteration having taken place in the symptoms, except an increase of the dropsy, and that, towards the conclusion, she did not suffer much unless when the bowels were being moved. Opiates and mild laxatives were the only remedies which procured relief. Mercury was not given in any shape. The ptyalism and eructations persisted throughout. When questioned about her complaint she

used often to lay her hand over the epigastrium, and declare that there was the source of all.

Thirty-six hours after death I examined the body, assisted by Mr. Brady of Newtown Mountkenedy.

Emaciation extreme; anasarca of both upper and lower extremities; fluctuation in lower part of abdomen. The hard prominence of the epigastrium was very distinct, all tympanitis having disappeared.

The cavity of the abdomen contained about a quart of clear straw-coloured serum. The rectum in its entire length was flaccid, and empty. The rest of the large intestine was very much contracted, containing a thick, tenacious, pale mucus; the mucous membrane was healthy, but vascular. The sigmoid flexure of the colon, for the distance of three or four inches from the sacro-iliac symphysis, was particularly narrowed, the sub-mucous tissue being thickened, dense, and of a pearly white colour; the muscular tissue was also hypertrophied, and of a bluish hue. This part of the colon was firmly bound down in its position by a hardening of its mesentery, which presented a great thickness where it divides to enclose the intestine, and it had in that part a dense, firm, and knotted feel, with small nodules of hard, yellow, adipose material projecting under its surface. The same degree of alteration was remarkable as far up as the transverse colon inclusive, and the subperitoneal cellular tissue of the left side, generally, was indurated and contracted; even the spleen and kidney were thus affected, the latter was smaller than the one of the right side, and firmer; its cortical substance was atrophied, and its pelvis was very vascular.

The gastro-hepatic omentum was very dense, hard, and much thickened, especially that part of it in front of the foramen of Winslow, and the contained vessels and ducts were intimately cemented together. The same thickening and hardening had invaded the cellular tissue surrounding the cardiac orifice of the stomach, which forcibly resisted the introduction of even the little finger. The stomach was small, and its mucous mem-

brane dark-coloured, but otherwise presented nothing remarkable, except that it was connected with the left extremity of the pancreas, which was universally hard and enlarged, and had lost every trace of its natural structure. Near the centre of this gland, and at its lower edge, existed a thin, translucent, horny cyst, which was slightly prominent, about the size of a walnut, and lay directly over the aorta. Its base was surrounded by a hard, cartilaginous, scirrhus formation, which in part projected into it. The rest of the gland was composed of a less solid, but unyielding, heavy substance, apparently made up of dense, closely interwoven, membranous bands.

The pancreatic duct was pervious for about an inch, only, from the duodenum. The ductus choledochus and hepatic ducts were not interrupted in any part of their course. The inferior transverse portion of the duodenum was closely adherent to the morbid pancreas, and, by being, as it were, drawn towards it, was so contracted as scarcely to admit the index finger. The mesenteric vessels and nerves were also involved in the scirrhus mass, which was so closely united to the subjacent parts, that it was necessary to remove them along with it from the surface of the spine underneath. The aorta was diseased in its entire course through the abdomen. There were atheromatous and ossific deposits under the lining membrane, which in some points was eroded.

The liver was rather small, of a dark grey colour, and dense, owing apparently to a thickening of its cellular tissue. The gall-bladder contained a small quantity of light yellow-coloured bile, and its coats were much thickened.

The thoracic viscera were healthy; there were old pleuritic adhesions. The heart was small and firm.

In this case the pancreas, which was much more degenerated than any other part, was evidently the point of origin of a scirrhus disorder, which by secondarily affecting the other parts, thus gave rise successively to the symptoms of contraction of the colon and of the cardiac orifice of the stomach. Neither of these canals was so much reduced in diameter as to present



to the passage of the food, or fæces, any great obstacle, which was increased in both instances by spasm, no doubt the cause of the temporary dysphagia, as during its continuance (it lasted for a week) the patient was nourished by enemata of broth, as she could not swallow even liquids. She was then under the care of my friend, Doctor M'Clelland. When I saw this lady the nature of the disease and the parts affected were *pretty* evident, although, independent of the induration in the epigastrium and emaciation, the usual symptoms of scirrhus of the pancreas, such as vomiting, jaundice, and epigastric pain, were either absent, or were so very insignificant, as to be obscured by the more urgent symptoms arising from contraction of the large intestines. Complications of this kind it is, in the diseases of the pancreas, which render their diagnosis a matter of so great difficulty,—a difficulty elegantly and forcibly expressed by a French author in reference to the symptoms of inflammation of the gland. He says: “Ses cris de douleur s’il en a de propres, sont étouffés par ceux bien plus énergiques de l’estomac, du foie, des intestins ou du péritoine toujours souffrans en même temps et bien plus vivement que lui.”\* The ambiguous nature of any pain peculiar to affections of the pancreas is commonly admitted, and many think, with the author just quoted, that the only certain guide in such cases is the detection of the enlarged or indurated gland, which, in general, is possible only in an advanced stage, after great emaciation has ensued. This sign, however, in the case I have related, so far from affording assistance towards forming a diagnosis, was itself the very source of error.

The enlarged† pancreas has been observed to be the seat of

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\* *Nouveaux Elémens de Pathologie Médico-Chir.* Par Roche et Sanson, t. i. p. 613.

† “Cum ad hoc stadium pervenerit morbus, plerumque tactus ope percipi solet tumor, magis minusve mobilis, durus, ad magnitudinem pugni accedens vel etiam eam excedens, supra umbilicum positus, mox ad epigastrium, mox ad alterutrum hypochondrium tendens si tangas sæpe dolorificus interdum pulsans.”—J. Frank, *de Morbis Pancreatis*, &c., p. 368.

pulsations, but, being without any of the other characteristics of aneurism, except, perhaps, a bruit de soufflet, it is readily distinguishable from the latter. Dr. Fletcher lately brought before the Birmingham Pathological Society a specimen of scirrhus of the pancreas, the head of which was very much enlarged, and enclosed the duodenum, so as to form a stricture of that intestine, just beyond the pylorus. The parts had been removed from the body of a woman, aged 52, who was extremely emaciated, and whose countenance indicated organic disease. She complained of great thirst; the stomach rejected all aliment, and the bowels were costive. Her sufferings, at times, were extreme, and the pain was seated in the region of the stomach, towards its pyloric extremity, and was increased by pressure. The whole surface of the abdomen was tender; there was hardness, and increased space of dulness in the epigastrium, and, on applying the hand, a very distinct pulsation was perceptible, simulating an aneurism, each impulse being attended by a distinct bruit de soufflet, while she lay in the recumbent posture, but which ceased on her being placed in the semi-erect, in which position the pulsation in the epigastrium very much diminished. There was no bruit de soufflet audible on applying the stethoscope over any part of the spine.\* A case related by Sandwith† is peculiar as regards the situation of the pulsation. An unmarried woman, aged 67, complained of continued pain, in the epigastric region, which extended to the right hypochondrium; deep pressure increased the pain, and there was a remarkable pulsation below the cartilages of the false ribs on the left side. She was a good deal emaciated, and without fever. Bowels costive; appetite bad; no sickness or vomiting. The pain sometimes was most intense, and on these occasions she exhibited signs of distraction. Her body was agitated in the most violent manner; she tore the bedclothes, and said she could tear the flesh from her bones. The pancreas was found to have the

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\* Provincial Medical Journal, Jan. 20, 1844.

† Edinburgh Medical and Surgical Journal, vol. xvi. p. 381.

usual marks of scirrhus, and the splenic artery was imbedded in scirrhous matter.

Andral mistook a case for aneurism of the aorta. It is headed "Cancer du Pancreas simulant un Anevrisme de l'Aorte abdominale." A woman, aged 54 years, who had been three months ailing, was admitted into La Pitié. There were intolerable pains in the dorsal region, radiating to the left side of the thorax; they continued sometimes for hours, sometimes entire days, affected the whole of the abdomen, and were lost in the region of the spleen. She compared these pains to the blows of a hammer, sometimes to the darting of a dagger through the back; they were worse at night. Her tongue was coated, yellowish; there was complete loss of appetite; her face was pale and expressive of suffering. Nothing could be discovered on examination of the hypochondria by the hand. An attack of diarrhoea, with low fever, carried her off. The liver was sound; between this organ and the diaphragm was a cancerous tumour the size of an egg. The intestinal mass having been separated, an enormous tumour was immediately observed in the position of the pancreas, formed of encephaloid, scirrhous, and tuberculous matter. It was the pancreas which had undergone this transformation, only a few fibres of it could be distinguished in the middle of this mass, which compressed the abdominal aorta, and the nervous plexus spread over this vessel, which accounts for the acute pains the patient suffered during life.

Andral asks: "Was it possible in the present state of our knowledge to determine the seat of this disease, and to arrest its progress? We do not think so," he answers, "our experience only served to lead us into error." "En nous rappelant des faits analogues, en considérant cette douleur perforante, ces coups de marteau reçus dans le dos, nous étions très portés à croire à l'existence d'une anevrisme de l'aorte abdominale."\*

These cases show how closely scirrhus of the pancreas may

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\* *Lancette Française*, t. v. No. 16.



simulate the symptoms of abdominal aneurism.\* In that of Andral, the severity, and nature of the pain so similar to that observed in certain cases of aneurism of the aorta, sufficed to lead astray one of the most learned and experienced physicians of the age. In mine, the error was inevitable, where all the physical signs of aneurism seemed to be present. There was not only a rounded, yielding tumour in the course of the aorta, but with pulsation and bruit de soufflet, and an apparent systole and diastole, due, no doubt, to the early development of the cyst, which, probably, in the progress of the disease, had its fluid contents lessened by the encroachment of the scirrhus, while, the close union of the latter to the spine having removed the impulse of the aorta, towards the conclusion no other symptom remained but the bruit de soufflet, which was not likely to mislead.

Excessive pain is not a constant symptom of scirrhus pancreas, it is generally of an obtuse kind, deep-seated, often resembling lumbago; sometimes there is none whatever, and, on account of the great emaciation, the patient has been supposed to be phthisical. “J’ai vu,” says Laënnec, “plusieurs fois, avec mes confrères, MM. Recamier et Richerand, une jeune dame qui semblait phthisique, et qui fût avancée dans la maladie.—J’affirmai constamment que les poumons me paraissaient sains, et effectivement ils furent trouvés tels à l’ouverture de son corps—la maladie était due à un squirrhe du pancreas accompagné d’un simple catarrh.”† A mistake of this kind is not to be expected at the present time, now that we have all profited by Laënnec’s discoveries; but the fact is interesting, as bearing on the point in question, and as it shows how easily, without the knowledge derived from auscultation, names high in the Profession were formerly liable to be led astray.

Had jaundice or obstinate vomiting existed in these cases

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\* For another disease simulating, by its pain, that of aneurism of the aorta, see my paper “on Exostosis of the Spine,” in the 24th volume of this Journal.

† *Traité d’Auscultation*, t. i. p. 693.

the nature of the disorder would have been less obscure. These symptoms are frequent attendants on scirrhus, as well as other affections of the pancreas, and arise, the first, from obstruction or obliteration of the common or biliary ducts, by the pressure of the morbid growth, then seated in the head of the gland, which, in the same way, is often found to narrow so much the pylorus, or duodenum, that these have been found scarcely large enough to admit a common sized catheter, as in the two cases related by Sewall.\* It is, however, remarkable, that vomiting is not always consequent upon great narrowing of the parts. Michaelis saw a case in which there had been no vomiting, although the duodenum and pylorus were compressed to such a degree as scarcely to admit the introduction of a goose-quill; and Dr. Greene has given a case where there was no vomiting until a fortnight before death, although "there was great contraction of the pylorus, which was hard, thick, and firm. The ascending, and transverse colon, and head of the pancreas were bound down into a cancerous mass, with which the duodenum, also, was connected. The cystic and hepatic ducts were both obstructed by the cancerous growth, and were much dilated above the strictured part. The patient was intensely jaundiced."† When the stomach rejects its contents, soon after they have been received, the vomiting may be supposed to be due to its irritation, by the hard or enlarged pancreas; the food remains much longer if the pylorus be compressed, and when the obstruction is beyond the entrance of the ductus communis into the duodenum, it may be suspected when the food remains two or three hours and the rejected matters are more or less tinged with bile.

Enormous dilatation of the stomach, and of the gall-bladder and ducts, are additional effects of this compression, whence have arisen some singular mistakes. A man presented himself

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\* Medical and Physical Journal, vol. xxxi.

† Dublin Medical Journal, vol. xxv. p. 172.

to M. A. Petit with a tumour, in the epigastrium, having the form, the volume, and all the exterior characters of a hernia; it had come on after violent efforts. It was soft, compressible, easily reducible, and was attended by hiccup and vomiting. Petit thought he recognized a strangulated hernia of the stomach or colon. In the presence of all his colleagues he operated, and found the stomach in "the centre of the tumour unenclosed in a hernial sac." The engorged pancreas had pushed it forward, and kept it pressed against the abdominal walls; it underwent thus a sort of strangulation, which occasioned all the deceptive appearances of a hernia. It was closely adherent to the pancreas.\*

The gall-bladder has, also, been mistaken for ventral hernia, as in an instance given in the Reports of the Pathological Society. A female, 86 years of age, had, four months before death, the symptoms of hepatic disease, and a tumour appeared a little above the umbilicus: it was soft and compressible, could be made to alter its position, and received a slight impulse from coughing. Mr. R. W. Smith exhibited the morbid parts. The liver was of a dark green colour, with a number of white, hard tubercles on its surface. Tumours, of a similar character, existed in the pancreas towards its right extremity, and the substance of the gland was remarkably indurated. The termination of the pancreatic and common biliary ducts was compressed almost to obliteration; the pancreatic duct, throughout the substance of the gland, was dilated so as to admit of the introduction of the forefinger. The ductus choledochus, and hepatic ducts in the substance of the liver, were also greatly enlarged: the latter formed cavities capable in some places of admitting the passage of two fingers. The gallbladder, distended to a very great degree, passed down, below the umbilicus, towards the right iliac fossa. A tumour, of scirrhus hardness, and about the size of a pullet's egg, lay behind the pancreas, but not connected with its

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\* Discours sur les maladies observées à l'Hotel Dieu à Lyons.



glandular structure, having the hepatic artery passing through its centre. The skin and internal organs were deeply jaundiced.\* M. Mondière,† in stating that the ductus choledochus is sometimes enormously dilated, refers to one instance, only, in which, he says, it had attained a diameter of two inches. He seems not to have been aware of the very extraordinary example of this, given by the late Dr. Todd, which is unnoticed even in the comprehensive and recent work‡ of Joseph Frank, on Diseases of the Pancreas and Liver.

Dr. Todd was requested to examine a girl aged 14 years. Her skin was orange coloured, and she was greatly emaciated; her lower extremities were anasarcaous. She seemed to suffer much pain, frequently screamed aloud, yet was almost insensible to external objects. There was a tumour observable in the abdomen, which on examination was found distended with fluid, and the epigastric and right hypochondriac regions were particularly so. A distinct tense swelling occupied those regions, and could be traced extending below the umbilicus. At one point, somewhat more prominent than the rest, a little below the ensiform cartilage, and to the right of the linea alba, a fluctuation was very evident. This point was sensible. Under the impression that there was an abscess of the liver, an opening was made, and two quarts of viscid, green bile got exit. After death the liver was found healthy, and the hepatic and common ducts were enormously distended, containing a quart of bile. They extended from the porta of the liver to the os sacrum, lying behind the duodenum, pancreas, and root of the mesentery, and stretching in a transverse direction, so as to cover the anterior surface of the right kidney and a greater part of the left. The smaller hepatic ducts were so much enlarged as to

■ Dublin Journal of Medical Science, vol. xvii. p. 382.

† Archives Générales de Médecine, t. xii.

‡ Præleos Medicæ Universa Præcepta. Monographiæ de morbis systematis hepatici et Pancreatis. Auctore Josepho Frank. Leipsiæ, 1843.

admit one of the fingers without difficulty. A valvular convolution in the cystic duct prevented the dilatation of the gall-bladder. The extremity of the common duct in the duodenum could not be discovered. The pancreas was scirrhus, and that portion of the gland, with which the ductus choledochus is connected, together with the surrounding cellular substance, was converted into a hard, solid mass, closely adhering to the duodenum, and the lower part of the enlarged biliary duct which seemed completely obliterated.\*

Cruveilhier gives an instance of scirrhus degeneration of the head of the pancreas, compressing the termination of the ductus communis, which, as well as the gallbladder, was very much enlarged, and the anterior surface of the pancreas was raised by a watery tumour, of considerable size, containing a transparent serous fluid. It formed an elongated pouch lying transversely, and was recognized as the dilated pancreatic duct, from the circumstance of its inner surface being marked by transverse wrinkles and the small openings of the branches of the duct.† The absence of these indications was sufficient to remove any supposition of the cyst, in the case I have given, being one of this description, even if its connexion with the scirrhus, which was obvious, could have left room for doubt.

To compression of the vena porta and cava is likewise to be ascribed the common occurrence of ascites, and anasarca, in organic affections and inflammatory enlargements of the pancreas. In the case of the latter, given by Dr. Crampton,‡ in which there was “a circumscribed hard enlargement in the epigastrium, nearly circular, with a defined margin, and very tender on pressure, the abdomen being very much distended, with evident fluctuation, and the legs œdematous,” the symptoms supervened in four days from the commencement of the attack.

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■ Dublin Hospital Reports, vol. i. p. 325.

† Anatomie Pathologique, t. i. p. 286.

‡ Transactions of Association of Physicians in Ireland, vol. ii. p. 137.

Dr. Crampton recognized the case as one of inflammation of the pancreas, and, in reference to the dropsy, says, that "inflammation of the serous membranes was probably an attendant." This is controverted by M. Mondière, who remarks, that "acute pain would, then, have existed, that partial peritonitis rarely, if ever, produces ascites, and that, having been present, it would not have disappeared so readily as it did." This opinion, I may add, derives much support from the fact of the legs having been œdematous, and from the subsidence of the dropsical symptoms *pari passu* with that of the enlargement of the pancreas, and is supported by a case, mentioned by Portal,\* of aneurism of the aorta caused by the pressure of an hypertrophied pancreas, and furthermore, by the analogous occurrence of dropsy in the advanced stage of mesenteric disease.

I have already alluded to the emaciation attendant on scirrhus of the pancreas, in reference to which Abercrombie says:† "There is much reason to believe that diseases of the pancreas have a most important influence upon the functions of digestion and assimilation, and that this is one origin of the remarkable affection that has been called anæmia." Pemberton remarks,‡ that "the body (in scirrhus of the pancreas) is often reduced to the utmost state of emaciation,§ and the integuments of the abdomen appear to rest upon the spine; this appearance, therefore, of the abdomen, when it occurs, might distinguish diseased pancreas from scirrhus liver, or enlarged spleen; in which cases the patient before death has, almost always, a considerable enlargement of the belly. In the same way, also, this will distinguish it from affections of the mesenteric glands, for here too, before death, the abdomen becomes enlarged. Diseases of the kidneys produce little emaciation."

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\* *Traité d'Apoplexie*, p. 390.

† *Edinburgh Medical and Surgical Journal*, vol. xxi.

‡ *On the Abdominal Viscera*, p. 66.

§ "C'est aux individus atteints d'affections organiques du pancreas qu'on peut appliquer à bon droit cette expression figurée, *la peau est collée sur les os*." — *Dict. des Dict. de Médecine*.



Having now referred to most of the symptoms\* usually ascribed to diseases of the pancreas, I must beg to trespass a little farther upon the attention of the Society, while offering a few remarks upon one I observed in the case I have brought forward, and I am the more desirous of doing so, because, though it has been noticed frequently by our continental brethren, this symptom has not been even mentioned (so far as I am aware) by any writer in our language. I allude to the ptyalism.

According to M. Mondière:† “the physician who suspects an affection of the pancreas, should above all things pay attention to the state of the salivary glands and their secretion. Fourcroy had already observed, that in ‘obstructions’ of the pancreas the salivary glands separated more saliva than natural. Sometimes, so far from the secretion of saliva being augmented, it is, on the contrary, diminished.” All this is referred, by M. Maria Gelcen, to the effect of sympathy, the absence or presence of ptyalism depending on the nature of the affection of the pancreas. “There exists,” he says,‡ “a great sympathy between the salivary glands and the pancreas, on account, doubtless, of the similitude of their structure and functions, and the knowledge of this sympathy, he adds, can explain to us why there ensues a considerable ptyalism in consequence of lesions of the pancreas, and why the salivary secretion is considerably diminished in its engorgements or obstructions.” Certain instances of metastasis of inflammation are attributed to this sympathy; thus Andral found the pancreas injected in an individual who had a very much enlarged parotid; and Mondière

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\* In the case of scirrhus pancreas by Abernethy (*Lancet*, vol. xvii. p. 66), the patient “was constantly stooping forwards; towards the latter part of his life he lay in bed propped up with pillows:” just as occurred in the case I witnessed. This position is generally assumed, as it relieves the epigastric pain, and was remarkable in both of Mr. Sewal’s cases. In the first of Dr. Crampton’s cases, that of chronic enlargement, it is worth remembering, that, on the contrary, the patient could not stoop, from the pain of the tumour in the epigastrium.

■ *Archives Générales de Médecine*, t. xii. p. 153.

† *Journal Complémentaire*, t. xi. p. 10.

cites the case of a person with a great enlargement of one parotid, which, having rapidly disappeared, was replaced by an affection of the pancreas; inflammation of the testis succeeded to this, and finally a blister settled the inflammation in the parotid which suppurated.

Vascular congestion of the pancreas, as of the liver, may be indicated by its tumefaction and diminished secretion, or by a copious flow of the latter. Both of these occurrences took place in the case recorded by Dr. Percival,\* the tumour formed by the pancreas, in the epigastrium, having been removed by a spontaneous diarrhœa.

The high authority of Dr. Copland† lends weight to the opinion which attributes to augmented pancreatic secretion, a certain form of diarrhœa (the *D. pituitosa* of Sauvages) and that in connexion with the salivary glands. He says: “in some forms of this, occurring during difficult dentition, or after the use of mercurials, or upon the suppression of ptyalism, the stools have consisted of a thin, ropy mucus, of a translucent hue, and have seemed to be augmented pancreatic secretion.” This form of diarrhœa, when mercurial, is styled by Dietrich,‡ “ptyalismus pancreaticus mercurialis,” because the mineral affects the abdominal rather than the buccal salivary glands.§ Pereira, regarding it, says: “there is fullness of the left hypochondrium; burning pain and tenderness of the region of the pancreas; and the evacuations are frothy, whitish, tough, and often greenish, at least in the commencement, from intermixed bile.” “These

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\* Trans. King and Queen's College of Physicians in Ireland, vol. ii. p. 129.

† Dictionary of Practical Medicine, vol. i. p. 524.

‡ Ephem. A. C. N. t. viii. obs. viii. p. 25.

§ Mr. Colles has omitted to notice this affection, but has described the more common dysenteric symptoms produced by the mercury, “taking effect on the alimentary canal instead of the salivary system.” “From the third to the seventh day of the administration of mercury, the patient is liable to attacks of griping, frequent desire to go to stool, and tenesmus; and these efforts are only attended with slight evacuations, chiefly of mucus tinged with blood.”—*Colles on Venereal*, p. 44.

symptoms" he continues "may fairly be referred to an affection of the pancreas analogous to that of the salivary glands."\*

In the Dict. des Sci. Méd. it is said, that "when inflammation of the pancreas is sympathetic of that of the salivary glands, there is observed occasionally a sort of 'balancement' between the secretion of the pancreas and that of these latter; thus, when the salivation is very abundant, the local symptoms of the inflammation of pancreas diminish, and constipation ensues; when, on the contrary, the salivation as well as the irritation of the salivary glands diminish, an abundant diarrhoea and symptoms of an affection of the pancreas follow."† A case given by Schmackpfeffer‡ illustrates this. A girl, 29 years of age, contracted syphilis in becoming pregnant. After delivery she was placed on corrosive sublimate; having used it for some time the symptoms disappeared, but she was salivated to the amount of four pints per diem. This secretion having diminished, a diarrhoea set in, which augmented in proportion to the diminution of the former. She became feverish; had great thirst; loss of appetite; nausea; with distended belly. She complained especially of *anxiety* in epigastric region, with heat, and of deep, obtuse pain, fixed in that position and extending towards the right hypochondrium. These symptoms were augmented when the stomach was full. After an improvement of five days' duration she became worse, and had bilious vomiting. She felt continually above the umbilicus a deep pain, which hindered her lying on the back or left side, and was augmented by full inspiration. Diarrhoea returned to such a degree that she had thirty liquid stools in the twenty-four hours, and the stools, which had been yellow or watery, resembled saliva. Then supervened swelling of the parotids, which were hot and painful, and the stools became suppressed. She died with symptoms of an affection of the head and chest. The pancreas was found red and tumified, particularly at its right extremity; it appeared

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\* Materia Medica and Therapeutics. 2nd Ed. p. 708.

† Art. Pancreas.

‡ Observationes de quibusdam pancreatis morbis. Hallæ. 1817.



also abnormally consistent, and blood issued in many points from it when incised. Its excreting canal was much dilated. The parotids were inflamed, and there were adhesions of the left lung, with some effusion.

An analogous case is given by Professor Harless.\* A student submitted himself to mercurial treatment for the removal of some symptoms which he imputed to an old syphilis. For months he took regularly half a scruple of calomel daily, when, to remove *pediculi pubis*, he used frictions of mercurial ointment. After the third friction his mouth became sore, and a violent salivation was established, and the stools, before natural, became suppressed. Professor Harless then saw him and found no other symptom of disease but the salivation, with the exception of tension of the epigastrium. By the use of quinine and opium the salivation diminished; at the same time the tension of the epigastrium increased, the patient complained of a sensation of disagreeable heat in this part, and, after having examined it with care, the Professor soon discovered a slight tumefaction. The constipation persisted, and repeated lavements succeeded in removing some hardened fæces only. The salivation, however, which had been much diminished, reappeared with more violence, and immediately the epigastric symptoms were relieved, the salivary glands becoming simultaneously tumefied, hard, and painful. The salivation was again abated without the pancreas appearing to suffer, and finally, on the tenth day this and the epigastric pain returned simultaneously and remained till the fourteenth day, when the patient fell into a copious sweat, which continued three days and removed all the symptoms. Mondière says: “comparing this case with Schmackpfeffer’s it is worth remarking the suppression of the fæcal matters as soon as the salivation was established, the reciprocal influence of the pancreas on the salivary glands, and of these upon the former; finally, the prompt disappearance of every

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† Über die Krankheiten des Pancreas, u. s. w. in Abhandlungen der physikalisch Med. Societät, zu Erlangen.

symptom of disease of these secreting organs by the establishment of a copious sweat." Dr. Crampton's case, already mentioned, confirms this view of a reciprocal influence existing between the pancreas and salivary glands, as the inflammation of the former seemed to be due to the patient, with his mouth sore from mercury, having exposed himself to cold after a warm bath.

We have already seen that diarrhœa, alternating with salivation, is a consequence of inflammatory derangements of the pancreas; in scirrhus of the gland, on the contrary, continued constipation\* is almost invariably present, and, according to the authority already quoted, is attended by salivation, "which (as it is stated) coming on at a more or less advanced stage of the disease, is a symptom almost constant."†

This "balancement" of the secretion of the buccal and abdominal salivary glands is further illustrated by what occurs during pregnancy, in which salivation accompanied by constipation is very frequent.‡ In suppression of the lochia§ and in hysteria,|| salivation has been observed, but according to Dr. Dewees, "the sympathy between the salivary glands and the impregnated uterus is, perhaps, as remarkable as any that takes place," and Mondière seems to consider pregnancy as an occasional predisposing cause of inflammation of the pancreas. If the increased action in, and determination of the fluids to, the salivary

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\* Alvi obstructio pertinacissima evadit. J. Frank. Op. Cit. p. 870.

† Arch. Génér. t. xii. p. 138.

‡ "In a very moderate degree it (salivation) may be considered as a very general attendant upon gestation, as almost all women at such times have more than an ordinary quantity of saliva secreted; it is very distressing and enfeebling when excessive, and is, almost always, accompanied with acidity of stomach and constipation of the bowels. It has, almost always, an unpleasant taste, though not offensive in smell. It keeps the stomach in a constant state of irritation, and not unfrequently provokes vomiting, especially if the saliva be tenacious."—*Dewees on Diseases of Females*, p. 214. This was probably the nature of fluid eructations in the case I have given; the patient was not in the habit of spitting out the superabundant saliva.

§ Rees on Disorders of the Stomach.

§ Sydenham, Whytt, Cheyne, and others; see Laycock on Nervous Diseases of Women, p. 266.

glands be transferred from these to the pancreas it can be readily allowed, that inflammation of the latter is as possible as the more fortunate occurrence of an increase of its secretion. Chambon de Montaux\* makes no doubt of this being the source of the glairy, or watery fluids vomited by pregnant women. "On examining," he says, "the nature of the humours which some pregnant women vomit, it is seen that they are mostly composed of a liquid, thin and analogous to the saliva; it appears that in these cases the pancreas furnishes an abundant portion of this fluid, which ascends like the bile into the cavity of the stomach, from which it is expelled by this viscus irritated by it." He has so little doubt on the point, that he argues from it the probability of salivation in pregnancy; he continues: "therefore, the salivary glands being allowed by physiologists and physicians to have a similar use and structure to those of the pancreas, it is not to be wondered at if they furnish an abundant saliva." The diarrhoea without fever, of pregnancy, in which the stools contain "a great quantity of serosity," and to which he gives the name of "diarrhéé nerveuse,"† may have its origin likewise in augmented pancreatic secretion.

The same kind of sympathy between the testes and pancreas seems to be indicated by a case already alluded to, and on this subject Portal remarks, that "there are diseases of the testicle which affect the lumbar region, and give rise to suppuration of the pancreas or its neighbourhood."‡ The sympathy between the testes and parotids is fully manifested by the phenomena of metastasis of inflammation, from the latter to the former, in cynanche parotidea, and "experience has proved that this local determination is a favourable omen, for its non-occurrence as well as its expulsion has been frequently succeeded by inflammation of some other organ, generally the brain or its membranes, and even death has been the unfortunate issue."§ The

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\* *Maladies de la Grossesse*, t. i. p. 87, "Du crachement frequent."

† *Op. Cit.* p. 181.

§ *Anatomie Medicale*, t. v. p. 353.

‡ *Cycl. Pract. Med.*—Art. *Parotitis*.



suppression of the ptyalism of pregnancy has been also followed by fatal consequences from a like cause. “Baudelocque knew a young married lady who had an abundant salivation during her first pregnancy. M. Bouvart and he were for a long time solicited by her family to stop it, but they obstinately refused. At her second pregnancy the salivation reappeared. Bouvart had died, and they called another physician and another accoucheur, who arrested the salivation, and the next day the lady was seized with apoplexy.”\*

In the fatal cases of inflammation of the pancreas related by Schmackpfeffer and Lawrence, can we not recognize a similar translation of the morbid action to the brain and its membranes, and an additional proof of the identity of the pathological relations of the pancreas and the other salivary glands? In Schmackpfeffer’s case the suppression of an extremely copious diarrhœa, derived apparently from pancreatic secretion, was coincident with a return of the tumefaction of the parotids and the fatal symptoms. In the one recorded by Mr. Lawrence† (though unfortunately the condition of the bowels, towards the conclusion, is not mentioned), yet, during the greater part of its continuance they were relaxed, the patient suffering much from thirst, and from pain, which was occasionally very severe, and referred exactly to the situation of the pancreas. She felt, besides, exhausted, and her skin was completely bleached. The lady’s illness commenced when she was five or six months advanced in her first pregnancy, and was attended with the foregoing symptoms of pancreatic disease, and she died five weeks after delivery, without any symptom of an affection of the head having manifested itself, unless as such be considered an irritability of the stomach, which came on five days before death, during which period nothing but rennet-whey was retained on the stomach. On dissection the internal parts of the body were extremely pale, and almost bloodless, with the exception of the

\* Imbert, quoted by Doctor Churchill, “on Diseases of Pregnancy,” &c. p. 76.

† Med. Chir. Trans. vol. xvi.

spleen and pancreas. This gland was throughout of a deep, dull red colour, firm to the feel externally, and when divided the lobules felt firm and crisp. The cellular texture round the pancreas and duodenum, the omenta, the root of the mesentery, the mesocolon and appendices epiploicæ of the arch of the colon, were loaded with serous effusion. The surface of the dura mater, covering the cerebral hemispheres, was lined, in the neighbourhood of the falx, with a very thin, soft, and almost mucilaginous layer of a light red tint. It could be scraped off with the handle of the knife, leaving the membrane of its natural appearance. There was slight serous infiltration of the pia mater. The blood-vessels of the brain were moderately full.

From all that I have stated, the close relations and intimate sympathy existing between the abdominal and buccal salivary glands can scarcely be questioned, and that the value of these facts, applied to the diagnosis of diseases of the pancreas, is not altogether problematical, I think, is proved by the following case, kindly communicated to me by Mr. Robert L. Mac Donnell, which of itself does away with the reproach of a recent writer,\* who seems not to have known of the two cases recognized by Drs. Percival and Crampton, when he says, that “dans l’état actuel de la science on peut quelquefois soupçonner une affection du pancreas, mais on ne la reconnaît jamais.”

Thomas Meighan, a labourer, æt. 24, was admitted into the Meath Hospital, Sept. 30, 1841, under the care of Dr. Graves. He stated that for four years he had been subject to severe pain in the stomach, which came on, at first, only once a fortnight, but then after each meal, and sometimes in the middle of the night. He was pale and emaciated; his skin sallow, features pinched; and he had much the appearance of a man labouring under organic disease. The pain alluded to was seated in the epigastrium, and came on generally after meals, and was relieved by vomiting. The abdomen was by no means prominent, no tumour could be felt, and pressure did not cause pain. His

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\* Dictionnaire des Dictionnaires.—Art. *Pancreas*.

tongue was remarkably clean and moist. Pulse 72, soft and regular. Respiration natural. He had constant constipation. On the 2nd of October he had an unusually severe paroxysm of pain, followed by vomiting of nearly a basin full of dark fluid, covered with a thick scum of the same colour; this matter was inodorous, and its discharge was succeeded by a complete subsidence of the pain. He had had one such attack before admission. Meighan now passed under the care of Dr. Stokes. On the 6th of October he had a second attack of severe pain, followed also by vomiting of a fluid, resembling the mash for horses composed of bran and water. This also was without smell. On the 20th of October it was observed that the abdomen was more distended and prominent than before, and fluctuation was easily detected when he was placed erect. There was no change in the other symptoms. The constipation required the constant use of a combination of castor oil and croton oil. On the 21st he had another attack of vomiting of brown fluid, and again, once more before death. The ascites increased, and his legs became œdematous, and the pain more severe, and more frequent; he emaciated, and the excessive constipation continued. The abdomen, however, remained without pain on pressure, and he never had the least headache or thirst. A week before death he was seized with severe diarrhœa, which resisted all treatment, and carried off the ascites and œdema of legs, and left the belly soft and flaccid again, without, however, allowing any tumour to be felt.

The thoracic viscera were quite healthy. The stomach and intestines were exceedingly large and distended. The muscular tunic of the stomach was hypertrophied, and its pyloric extremity had formed so intimate an adhesion to the liver that it was necessary to remove both together. The pylorus was not contracted. On that part of the left extremity which lies in apposition with the liver there was a well-marked depression, about two inches in its long diameter, and one inch across, with edges thick, hard, and elevated. On making an incision into this the



knife passed through an exceedingly dense cartilaginous substance, which was confounded with the structure of the pancreas. The liver was healthy, also the duodenum and jejunum, but the rest of the intestinal tract was covered with small patches of closely adhering lymph, as if dashed upon it, the intervening mucous membrane being very vascular. The submucous coat was thickened, and nearly of cartilaginous appearance. No hypertrophy of the muscular coat.

Mr. Mac Donnell has added: "The cleanness and great moisture of the tongue and mouth generally, were very striking, and attracted the attention of three German physicians,\* at the time attending Dr. Graves' Clinique, and from this circumstance, principally, they were led to pronounce the person to labour under disease of the pancreas. As this was the first time Mr. Mac Donnell's attention was directed to the subject he was inclined to doubt the accuracy of the diagnosis, and though the *post mortem* examination showed that the disease was not confined to the pancreas, yet that gland was sufficiently engaged to confirm the accuracy of their opinion, founded on the extreme moisture, and the pale and macerated appearance of the tongue."

The barmy nature of the fluid vomited in this case I have frequently observed in connexion with ulcers of the stomach, whence it was here evidently derived, seeing that the pancreas, from its degeneration, was incapable of secreting it; but the common occurrence of pyrosis, with rejection of limpid fluid alternating with diarrhoea, in chronic alterations of the pancreas, may, I think, throw light on many cases of the former not generally supposed to be derived from that gland. Andral's authority seems to be in support of this. After enumerating† the ordinary symptoms of pyrosis, such as constipation, salivation, curvature of the body forwards to relieve the pain, with rejection of fluid, having frequently the appearance of saliva, and always with the

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\* Drs. Krieger, Norman, and Günther, from Berlin.

† Cours de Pathologie interne, t. ii. p. 175.

property of being bitter and stimulating, he concludes: "all these are symptoms of inflammation and of different chronic alterations of the pancreas." Dr. Kerr\* admits, that "we are indeed without any evidence that the fluid is actually secreted by the stomach, and it has been surmised, from the resemblance between the natural secretion of the pancreas and the ejected fluid, that it may be derived from this source." The difficulty with him is the improbability of the pancreatic fluid passing into the stomach, which may, it appears to me, occur just as readily as the passage of the bile upwards by an inverted action of the duodenum.

Majendie, also Leuret and Lassaigne, found the pancreatic fluid alkaline in their experiments; and in those of Tiedemann and Gmelin the fluid which first flowed was acid, while the latter portions were alkaline. Müller considers it acid while fresh, from which it is rendered probable that the fluid of pyrosis, when tasteless as well as when acid, may be vitiated pancreatic secretion, which may, even in its natural condition, have different reactions according to circumstances, in like manner as the saliva, "which becomes alkaline when food is taken, though it is acid at other times."† But the saliva undergoes an increase of acidity occasionally; thus Prout found a case in which "acid seemed to be formed not only in the stomach but salivary glands, the breath of the patient smelt strongly of vinegar;"‡ and Guersent says, he thinks "this is generally the case in individuals who have the teeth destroyed by the effect of acids, it being more probable that they become worn away by the constant action of the saliva than by the matters vomited, which can have only a passing effect."§ In proof of this he says that he has relieved some cases of acidity by having absorbent substances kept in the mouth after these introduced into the stomach were without avail. In the same way the pancreatic fluid may become of increased acidity, and this is very likely to

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\* Cyclopædia of Medicine.—Art. *Pyrosis*.

† Mitscherlich. Müller.

‡ Monro on the Gullet, p. 412.

§ Dict. des Sciences Médicales.—Art. *Absorbans*.

occur when the fluid is superabundant, it being an observation that secretions altered in quantity are generally changed in their quality also. Even the mild secretion from the lachrymal gland becomes so irritating and acrid in scrofulous ophthalmia, and in inflammation of the lachrymal gland,\* as to excoriate the edges of the lids and the cheeks.

Nor should the excessive quantity of the fluid occasionally rejected in pyrosis raise a difficulty in tracing its source to the pancreas, when we consider the amazing extent to which the flow of saliva sometimes proceeds, and that the pancreas is three times larger than all the salivary glands together.† Dewees has observed the salivary glands during pregnancy to secrete from one to three quarts of saliva in the course of the day. In a case by Mr. Gorham,‡ the patient spat out as much as four quarts in the same period, and never less than two quarts; and in a case of scirrhus pancreas, mentioned by Rahn,§ it amounted to more than ten pints per diem. In fact Mr. Abernethy used to remark, that the pancreas is not so liable to disease as other parts, from the facility with which it secretes, and this will account for “its having never been observed to be the seat of inflammation by either Baillie, Meckel, or Andral.”||

Whether these deductions with regard to the occasional origin of pyrosis be well founded or not, it may be not altogether useless to have drawn attention to the subject. No doubt, I think, can remain as to the relative action of, and sympathy between, the abdominal and buccal salivary glands, which I have endeavoured to explain, and if, by bearing this in mind, assistance be afforded for a more accurate diagnosis of diseases of the pancreas, some good must be attained when all other symptoms are confessedly so obscure and ambiguous.

\* Dr. Todd “on Inflammation of the Lachrymal Gland.”—Dublin Hospital Reports, vol. iii.

† Blumenbach’s Physiology, by Elliotson, fifth edition, p. 88.

‡ London Medical Gazette, June 30, 1838.

§ Diagnosis Scirrhorum Pancreatis. Goëting. 1796.

|| Lawrence, Med. Chir. Transactions, vol. xvi.



ART. IX.—*Observations on Climacteric Disease, with Cases.*

By HENRY KENNEDY, M. B. T. C. D., L. R. C. S. I. ; one of the Medical Officers of St. Thomas's Dispensary.

To the late Sir H. Halford the Profession in this country stands indebted for the first distinct account of climacteric disease. The Paper alluded to was published in the year 1813, and after a good deal of searching I have been unable to find any farther notice of the subject. True, indeed, the Dictionaries and Cyclopædias of Medicine speak of the disease, but in a very brief, and to my mind, unsatisfactory way ; nothing, in fact, has been added to the original paper, while in some of them the matter of this valuable and elegantly written communication is not even given in full.\* Sir Henry Halford himself attributes the slight notice which has been taken of this disease to the fact, that being often joined with some organic lesion, it hence has been overlooked. This, no doubt, is one reason, though it strikes me another may be given, arising out of the idea, which I believe to be a very general one, namely, that climacteric disease is only met with in advanced life. This idea, which pervades the entire of the Paper alluded to above, will, I think, be found to be erroneous. *At least I may state with certainty that an affection which agrees in every respect with climacteric disease, is by no means unfrequently met with in individuals between twenty and thirty years of age.* To direct attention to this point, which I believe to be one of some importance to recognize, as well as to enter into some more of detail on the subject generally than has hitherto been done by any one, is my object in the following remarks.

From the time of Galen to the present period it has been nearly universally believed, that certain epochs of human life

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\* It may be right here to except Mason Good's account of the disease ; but even it is avowedly based on the Paper alluded to above. It is, however, worthy of perusal.

are very liable to be accompanied by disease of a certain character. A good deal of trouble has been taken to ascertain at what exact periods of life such a disease shows itself, and particular years, such as the forty-second and sixty-third, have been determined on: the latter of these periods has indeed been called the grand climacteric, as being the time above all others when the disease is apt to declare itself. In the cases of climacteric disease which have come under my own notice, I have not been able to confirm any of these points, nor indeed is it likely that such will ever take place. The different constitution of every individual, both bodily and mental, his pursuits, his habits as to eating, drinking, and clothing, and probably above all as to the exercise taken in reference to these, must, I should think, cause an endless variety in the periods at which the system gives way, and climacteric disease establishes itself. Be these things, however, determined as they may, it is enough for my present purpose to know that such an affection as climacteric disease really exists, for this point has been questioned: it is easily settled, however, by referring to any half dozen of grown up individuals, when it will be found that one at least of these has had the disease. Were I to speak from my own experience, I should say that the persons who pass through life without having laboured under it, once, if not twice, are the exceptions to the general rule.

Of the causes of this disease very little is known. In very many cases it is not possible to trace it to any, while in a few it seems to be brought into existence by such causes as the following:—a slight cold, the influenza, any sudden shock to the system, as for instance a trifling fall, anxiety of mind brought on by a man's business going astray, or, what is very common indeed, some disappointment, or "hope deferred," in relation to the more tender feelings of the heart—a debauch of any kind. Of these a common cold is the most constant, a point which Sir H. Hallford has especially noticed. It is self-evident however that such causes are not enough in themselves to pro-

duce the disease: they can only act by setting in motion a series of symptoms, for the production of which the system has been, as it were, previously preparing itself; in fact they are immediate, as contra-distinguished from predisposing causes: but it must be again repeated that in numerous instances the disease comes on without any assignable cause. While speaking of causes it must not be lost sight of that actual disease may usher in the attack, and continue through its progress. This part of the subject will be alluded to farther on.

Climacteric disease in general commences in a very gradual way. From three to six weeks may pass over, the individual not feeling quite well, and yet not making any distinct complaint. I have known it happen too, though it is not common, that the patient was observed by his friends to be looking ill for a considerable time before he made any complaints whatever. In the great majority of cases, however, the remarkable change the countenance undergoes is not observed till a later period of the disorder. Pains of one form or other are among the most common symptoms ushering in the attack: these may be of a darting and transient character, passing through the entire frame, or they may be more fixed and confined to a certain part. In the former case they are set down as rheumatic or gouty pains, according to the habits, or, it may be, the wishes of the individual; while in the latter nothing remarkable is to be observed about them, except that in general they are in a very marked degree periodic. Another very common symptom complained of in the earlier stages of the disorder is weakness, which is referred in general to the knees, the patient expressing himself in the usual way, by saying that these parts feel as weak as water. It is not alone when the patient is walking about that this weakness is complained of; on the contrary, they suffer from it while lying on a sofa, and I have seen it complained of to such a degree that it was described as amounting to absolute pain. It is also worthy of remark, in connexion with this sense of weakness, that it does not seem to be increased by any exercise the individual



may take. In one instance, which will be given in detail, this symptom recurred for several days, and at a particular time of each day, before any other symptom showed itself, the individual during this period wondering what could be the cause of such weakness.

It has been already stated that the disease under notice generally commences in a gradual way. To this, however, there are some remarkable exceptions, and this is an important point to keep in mind. I have known the disease commence with what may be called acute symptoms. Thus a common bilious attack has been followed at once by the usual symptoms, and well-marked climacteric disease has been established within fourteen days. A case of this sort will be detailed. A common cold, or influenza, have been already mentioned as ushering in the attack. But probably the most important of this class of cases is where the disease commences with head symptoms of so acute a character as to throw the medical man entirely off his guard. Under such circumstances a wrong view is very apt to be taken of the case, and erroneous treatment adopted in consequence. This will be alluded to again.

After the pains, which have been before spoken of, have existed some time, other symptoms make their appearance, in quicker succession too than the commencement of the disease would lead one to expect. The appetite begins to fail; this soon increases to a total loss of it; and finally, should the attack be a well marked one, an utter aversion for all sorts of food succeeds. With this there is of course loss of flesh, and strength both of mind and body, and above all the sleep at this period goes astray. In a disease which is marked by such a variety of symptoms there is no more constant one than this loss of sleep; one exception only has come under my notice where it did not exist.

Such are what may be called the general symptoms of climacteric disease, which has been described by Sir H. Hallford as consisting in a loss of flesh, in a very marked change in the

expression of the patient, and in a quickened circulation. The two first of these would appear to be all but constant: the latter however is by no means so. I have seen cases where from first to last the pulse was not raised in the slightest. As regards the expression it has been deservedly noticed, for it is a truly remarkable one: it is not merely that the individual looks ill, but all at once, as it were, several years are added to his life, and he gets the credit of being much older than he really is.

It must not however be supposed that the three symptoms just alluded to constitute climacteric disease. Far from it. I have never seen a case where others were not superadded, and for these latter it is that medical relief is commonly sought. The symptoms spoken of, varied though they be, may, for the sake of description, be referred to the head, chest, or abdomen. What it is which makes the disease take one of these directions in preference to another, we are of course in complete ignorance of: such is however the fact. When the head is the part affected, pain in it is the most common complaint: it may affect either the entire head, or it may be confined to the front or the back. It is very little amenable to treatment, while it is marked by the most extraordinary periodicity. In some instances it is not so much pain as weight which is complained of, and which is sure to be aggravated by any movement, as by shaking the head. In others again it is a sense of reeling or dizziness, or of the blood flowing to the head with unusual force, giving rise to the most distressing throbbing: each and all these feelings are almost invariably periodic. It is most important to bear in mind too what was before alluded to, that all these symptoms may be in a still more aggravated form, and may be accompanied by a sense of numbness, or even paralysis, of one side of the body. This is not a state of complete paralysis, for as far as I have yet seen, it is recovered from entirely. It is the form of paralysis which in my own experience is most usually met at a period of life at which this disease is not common, I mean between twenty

and forty years of age, and it is very readily indeed mistaken for other and more serious forms of the disease.

When the patient has complained of the chest the following symptoms have come under my notice:—severe pains in the shoulder joints, not to be distinguished from rheumatism; very distressing pains of a burning character referred to one or both clavicles, sometimes to the soft parts in the neighbourhood. At other times again these sensations have been complained of in one or more of the dorsal vertebræ. The most common chest symptoms, however, are most probably fits of dyspnœa: these may occur in the day-time, when they are in general slight, but they are certain to recur towards evening, or during the night, and, in the cases I have seen, with great violence. For the time being, in truth, the individual labours under well-marked paroxysms of asthma. With those fits the patient may be harassed with palpitation of the heart, which, however, may exist by itself, and when it does it gives rise to as distressing symptoms as any connected with climacteric disease. It may be observed, in passing, that the more localized any of these symptoms are, the more severely the organ affected seems to suffer. With the symptoms already detailed cough may also exist, which may at times be traced to bronchitis, or again may be of a spasmodic character, when no cause can be made out for its existence.

The digestive system suffers very constantly in climacteric disease, possibly more so than any other: some indeed have attributed the affection to derangement of the abdominal organs, but, I believe, erroneously. The tongue in general shows more or less of fur, while a bad taste in the mouth, particularly in the morning, is often complained of. The state of the appetite has been before alluded to, amounting in the worst cases to an actual disgust for all solid food; in such, thirst is a common symptom, particularly at night. Even in cases when food is taken, it seems never to be enjoyed, nor to nourish the patient as under other circumstances. Besides a distaste for food, dys-



pepsia in several forms may be met with: pain at any period after eating is very common; I have seen some cases where there existed the most violent attacks of gastrodynia, at least the symptoms were such as to lead me to suppose that the pain was owing to some irritation in the stomach.\* In others again it seemed to be seated lower down in the alimentary canal, the pain then coming on at a particular time of the night. In place of pain it is at times a sudden secretion of air which distresses the patient, and this may go on to a degree which no one can have any idea of who has not witnessed it. Like every other symptom in the disease it is periodic. A tendency to constipation of the bowels almost always exists, and this takes place whether head, chest, or abdominal symptoms predominate: the discharges are usually dark and unhealthy. Sir Henry Hallford, when speaking of the renal secretion, says that it is not diminished. From this opinion I must with every respect differ; at least I know that patients themselves have told me that their urine was not passed in the usual quantity. One thing is certain about it, that in many instances a deposition of the lithates is going on during the entire progress of the disease: this fact would go to prove, though to a certain extent only, that the more fluid parts of the urine were not in the usual quantity.

When speaking of the symptoms which the patient may complain of in or about the chest, pains in one or more of the dorsal vertebræ have been mentioned: similar pains are much more constantly met with however in the lumbar region, at times referred to the spinal column itself, and again to either side, or it may be to any of the nerves arising from this neighbourhood. I have known sciatica in the most violent form to accompany climacteric disease, and in one instance, attended by the late Dr. Ephraim M'Dowell and myself, paroxysms of pain of the most exquisite kind were referred to the right spermatic

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\* In two instances this organ was in so irritable a state as on several occasions during the progress of the disease to induce vomiting, from causes which, under other circumstances, would not have done so.

cord. The lumbar pains alluded to are often accompanied by a sense of beating in the part, while at times an actual jumping of some portion of the muscular structure takes place. Cases too will be met with where, in place of pain, the patient complains of a sense of tingling or numbness; in fact any morbid nervous sensation may exist. While alluding to nervous feelings it may be observed, that burning in the palms of the hands and soles of the feet is a very constant attendant of the disease. Anasarca of the lower limbs is another which will be met with pretty frequently: it is more common when climacteric disease comes on in advanced life, but I have seen it in a young person. It may go on from the slightest degree of puffing about the ankles or in front of the tibia, to the most considerable swelling of both limbs.

With any combination of the symptoms which have been detailed, it is scarcely necessary to observe that the mind must closely sympathize. I have never met an instance in which it was not more or less powerfully affected. In the severest examples of the disease the individual becomes totally unfit for his usual avocations: his thoughts are gloomy and desponding in the extreme, and nothing will persuade him but that his latter end is fast approaching. The state of mind is in truth very peculiar, and such as no one who has ever seen the disease could by possibility overlook. At times this is shown by great irritability of temper, and persons naturally of the most gentle dispositions become quite the reverse.

Such is a brief sketch of the more prominent symptoms which the disease under consideration presents, varied of course in a thousand ways in each individual case. I have before stated that in the majority of instances the patient refers his sufferings to one of the three great cavities of the body: exceptions to this rule will however be seen: thus I have met examples where the head and chest were affected alternately in the one patient, and again the stomach and heart: under these circumstances the disease is not so well marked as when only one set of organs

is attacked. Sir H. Halford states, that though he has met the disease in females, still its severer and better marked forms occur in men. While this is admitted, it should at the same time be observed, that within my own observation climacteric disease is fully as frequent among the former as the latter. I think too, that as a general rule, men suffer more during the progress of the disease from derangement of the digestive system and brain, while on the contrary females suffer more from symptoms referrible to the lungs or heart.

The duration of this affection is always very considerable: I have never known it occupy less time than between four and five months; while, on the other hand, I have seen individuals who were not quite well at the end of two years. Were I asked the average period that it takes to run its course, I should say about nine months. This point is one worth bearing in mind, for otherwise the patient is very apt indeed to lose confidence in his medical adviser, who may not have given him notice of the length of time his sufferings may last.

On the diagnosis it will be unnecessary to dwell long. As long as the disease is, as it were, developing itself, doubts may exist as to its nature, and these may last from a month to six weeks. The pains which have been already described as so constantly present in the earlier stages of the complaint, may be, and indeed I know they have proved very embarrassing to the medical man in making his diagnosis; and until other symptoms declare themselves it may be impossible to decide. The signs upon which most reliance may be placed are the loss of rest, of appetite, of flesh, and above all, the altered expression of the countenance, one and all of these too coming on and continuing without any apparent cause. To enter at any length into this part of my subject would here be out of place: it will suffice to revert again to two points, which have been already glanced at: one is the great importance of not mistaking certain cases of climacteric disease for actual organic disease: this, I must again repeat, is particularly apt to occur in reference to the



brain. One case will be given in corroboration of what is stated, that is where treatment was adopted which the circumstances by no means justified, and where, when a directly opposite treatment was had recourse to, the patient got well. In some cases too, where the heart is the suffering organ, the symptoms are so very like those of organic disease, that an erroneous diagnosis is very likely to be made. The second point alluded to is the necessity of ascertaining, as far as we possibly can, that no organic disease of even the slightest kind exists: I do not mean by this such an amount of real disease as might of itself cause the symptoms of the climacteric affection; for this may occur, though of course it would be easily recognized; but merely such an amount of disease as may serve to usher in the affection more immediately under consideration. When this happens, the one affection is very apt to aggravate and keep up the other, and *vice versa*; and hence the necessity for a correct diagnosis in this point of view. Of the diseases which in a very mild form may act in this way, and which have come under my own notice, I may mention bronchitis as the most common, then pneumonia, and lastly pleuritis.\*

A few words will suffice on the prognosis of this affection. In the majority of instances the disease may be expected to terminate favourably; more so, I should say, than what Sir Henry Hallford's remarks would lead one to expect. It is truly astonishing from what a state the patients, who labour under this affection, will recover. Over and over again persons are given up as hopeless cases of disease, and yet they ultimately come through, and live for years afterwards. It must not, however, be inferred from this, that the affection is therefore a trifling one. Far from it. Climacteric disease proves fatal often enough in advanced life, as to force on us the necessity of ever giving a guarded prognosis. Even in early life it may be fatal; one

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\* One instance of enlargement of the liver has also come before me, where the disease appeared to arise from it.

most important case of this sort came under my own observation, and will be given in detail.

As to the ultimate and perfect recovery of the patients, Sir H. Halford seems to think that they very seldom shake off entirely the effects of the attack. This, I confess, does not agree with the results of the cases which have come under my own observation; I mean of course the majority. Possibly the cause of the difference may arise from the fact that one party includes cases of the disease which occurred in early life, and where of course the chances of shaking off the disease entirely are much greater than in advanced age. I think it right, however, to observe, that patients between fifty and sixty years of age, after having passed through the disease, have expressed themselves as feeling quite well, and have appeared to their friends and others to be so.

On the treatment it will be only possible to make some remarks of a general character, such as it would appear to be important to keep in mind in the management of every case. What then is, or rather appears to be (for it is all conjecture), the nature of the climacteric disease? A decay for the time being of the several functions constituting life, but more particularly of those of the nervous system. To any one studying a case of the disease it appears as if the system had got tired, and could not carry on its various functions with its wonted energy. That the nervous system is profoundly engaged would appear to be evident: the periodic nature of almost all the symptoms, together with the fact that in the great majority of cases these symptoms are functional, not organic, would seem to confirm this idea. Whether it be true or not, however, certain it is that the treatment best adapted to the disease is consonant with it. In other words stimulants, as a general rule, afford the most relief, of course suited to the demands of each individual case.

In considering the treatment, the duration of the attack, which has been before alluded to, must not be forgotten. It may be stated, once for all, that it is not possible to shorten the

disease: its symptoms may be alleviated, or on the other hand, there is nothing easier than to aggravate them; but to put a stop to them entirely is, I believe, impossible. Hence the great importance of not using any treatment which has this object in view; in truth our treatment should, for a certain period at least, be what is called expectant: but when this period has passed over, then remedial measures may be employed, and with every prospect of success. While it has been just stated that the symptoms may be alleviated, it is right to observe that I mean only for the time being, for in fact they offer a degree of obstinacy for which every one should be prepared, and this occurs whether they be referrible to the head, chest, or abdomen. It is, if I recollect right, Dr. Stokes who has stated the important rule, that if we meet a set of symptoms, as for instance those indicative of heart or lung disease, and that these persist in defiance of all ordinary treatment, we may be led to conclude that organic disease exists. Now climacteric disease offers a remarkable exception to this rule: for here we will see a series of symptoms persisting, in spite of all treatment, not only week after week, but month after month, and yet the individual gets quite rid of them at last.

Another point of consequence in the management of these cases, though to some it may appear trifling, is to instil confidence into the mind of the patient. He must be told at all hazards that he will certainly recover, and I know no more important part of the treatment than for the medical adviser, as far as in him lies, to "minister to the mind diseased." If he do not attend to this point he may well indeed "throw his physic to the dogs." The mind, as has been already mentioned, is in a very peculiar state: for the time it dwells on every subject connected with the individual; it renders those selfish who were never so before; it exaggerates and depresses by turns; and what is most important to remember in connexion with it is this, that it, as well as all the other sources of suffering, are to an extraordinary degree influenced by the weather. It is, I be-



lieve, now generally admitted, that even in health we are affected more or less by the changes of the weather : in climacteric disease this sensibility is increased tenfold, the individual becoming actually a living barometer.

As to any specific line of treatment for this disease, I know of none. Any symptoms must be met as they arise ; it is possible to alleviate many of them, such as where pain exists ; but the important rule to keep in mind is, not to do too much. This is particularly to be observed as regards any treatment of a lowering character, which many of the symptoms that arise appear to call for. In advising the not doing too much, I by no means wish to imply that any deception is to be carried on. Far from it. All I mean to say is, that we are not to treat the disease as we would any ordinary one, nor the patient as if he were in his usual circumstances.

Of the medicines from which the most benefit has arisen in my own hands I may mention quinine and other tonics, the gum resins, acetate of lead, anodynes, and purgatives. One and all of these will in turn be found useful, more particularly quinine. It must be observed, however, that in the ordering of medicine for this disease, the ingenuity of the medical man will be taxed to the very utmost : the medicines, in fact, now cause symptoms which under ordinary circumstances they would not do : hence he is obliged to be very particular in his combinations, and will have to alter them again and again before they will be found to agree. Purgatives, which are peculiarly useful, afford a good example of what is meant. Thus, for instance, any one might order six or eight grains of cathartic extract and two of blue pill to be taken at bed-time : when he comes to inquire the next day, however, he learns to his surprise that the patient has passed a miserable night ; that he has had a great deal of pain, and it may be sickness of stomach, and very possibly the medicine has not acted at all on the bowels. Hence arises the necessity for combining, as a matter of course, such medicines as will be most apt to sit easy on the stomach, as the expression is,

and it is really very curious to observe what a slight alteration will answer the purpose: thus a grain or two of an anodyne extract, a gum resin, or even a tonic in general answers remarkably well. Sir Henry Halford recommends in these cases the compound decoction of aloes, and I believe it seldom disagrees.

Together with the means just indicated, a change of air and scene is ever desirable: the proper period for advising these is however most important. I have on different occasions known individuals sent to the Continent and elsewhere, and return again, no change for the better having taken place, and often very little obliged to their medical adviser. At least one-half of the period usually occupied by the disease should be allowed to elapse, that is, about five months, before any change of this sort is thought of: it will then come on with good effect, and tend powerfully to restore health.

In those instances where some appetite still remains, the diet should ever be plain in quality, and moderate in quantity; any, the slightest, indiscretion is sure to aggravate the sufferings of the patient, and this, I have observed, is more apt to take place at the end of forty-eight rather than twenty-four hours. In many instances animal food causes so much pain during digestion that it has to be given up for the time: of course other and milder food must be used. Other points in the management of these cases might still be alluded to, but I believe the great and leading ones have been stated, and to enter further into this part of my subject would prolong the Paper to an uncalled for length. Before concluding, I shall detail a few cases illustrative of the several points already glanced at.

CASE I.—A gentleman in his 27th year, without any apparent cause, began to suffer from extraordinary weakness of his knees: it came on and went off at a particular period of the day, and lasted, without any other symptom whatever, for a fortnight. He then began to complain of pains, which were described as of a burning character, and which affected the soft parts about one and sometimes both clavicles. These were at

first slight, and only felt in the day-time: by and by, however, they became more severe and more constant, and ultimately the nights of the patient were rendered absolutely miserable by these pains, which entirely prevented him from lying on either side. With these symptoms there was impaired appetite, with very considerable loss of flesh, a marked change in the expression of the countenance, occasionally a sense of burning in the palms of the hands, and always a tendency to constipation. There was no fur on the tongue at any period of this case, nor was the pulse raised in the slightest, provided the patient kept at rest; but a very slight exertion, or a very small quantity of any stimulant, was enough at any time to raise it considerably. The mind was gloomy and despondent in the extreme. In this state the patient continued for nearly seven months, during which time a variety of treatment was tried, and among the rest country air; but all without avail. At this period the several symptoms gradually began to abate, apparently under the use of full doses of quinine, and finally the patient recovered completely at the end of about ten months, and has remained well ever since, six years having elapsed since the attack.

This case presents a well-marked example of the disease under consideration. Its mode of commencement, as well as the anomalous pains, are both worthy of notice. At one period it was supposed the patient was about to get phthisis: subsequent events, however, did not verify this conjecture. The case was remarkable too for there not being an entire loss of appetite, such as marks many of these cases.

CASE II.—W. K., a gentleman in his 24th year, was observed to be looking ill for a month, without making any complaint whatever. He had been, while an infant, very hard to rear, but up to the period of the present attack no sickness of any moment had occurred. After the month had elapsed he began to complain of some pain in the lumbar region of the spine. It was intermittent in its character, and at first very slight, so much so as to be scarcely complained of; in the course



of three weeks, however, it had increased so much as to become a distinct cause of distress, and, finally, the patient's rest was regularly broken by the pain coming on at a particular hour of the night. It is to be observed that it was not fixed on any one spot: the treatment adopted drove it, as it were, from place to place: at times it was referred to the spine, high up between the shoulders, and again as low down as the sacrum. With this symptom the bowels had become constipated, the urine was somewhat diminished in quantity, and constantly deposited the lithates, while the patient had lost a good deal of flesh. He was still, however, going about, and his appetite, though impaired, was not otherwise deficient. His mind had become depressed, and to an extraordinary degree anxious about himself. At the end of about two months and a half the treatment used seemed to be benefiting him for several days, and under the highest advice he was sent to the country. He remained there five weeks, during which time—so far from improving—he rapidly lost ground; and when he returned to town it was at once evident that his life was in the most imminent danger. He was now very much emaciated; the pulse could scarcely be felt at the wrist; the appetite was entirely gone; and he was obliged from weakness to be constantly reclining. He did not, however, suffer from pain any where. From this period till his death, which took place about a month later, he presented but too well-marked an example of an entire break up in the system,—a complete wreck both of mind and body. Subsultus of the entire body made its appearance during this last month, and also, though a later symptom, an apthous sore throat. Within a week of his death too, what might be called a typhoid state came on, and at times the mind wandered a good deal. The entire duration of this case was about five months and a half. It was not in my power to obtain a post-mortem examination, which I much regret.

The leading features of this important case I have given in

full. It is the only instance which has come under my notice, and which proved fatal in early life. Its gradual commencement in what at first appeared to be of no moment, and its progress, step by step, from bad to worse, or nearly so, are all worth noting. The apparent amendment which took place previous to the patient going to the country was owing to full doses of quinine. It will be observed that during the entire of the case no particular organ seemed to suffer. There was no complaint of the head, nor was there any cough, nor could the stethoscope detect any sign of disease; and though the digestive system was deranged, it was more as if it had ceased to perform its functions, than that any sign of disease whatever existed. This is not either my individual opinion, for during the last month the patient was seen by Sir Philip Crampton and Sir Henry Marsh, and neither of these eminent persons could, on the closest examination, detect any sign of organic disease.

CASE III.—A person about 49 or 50 years of age, got what he called a bilious attack, and which he had often laboured under before; for this he was ordered some medicine, and after four days he was all but well. While in this state he happened to dine with the Lord Mayor (for it was in the times of the old Corporation), where I should suppose he indulged rather freely. Certain it is that the following day, when I saw him, the attack seemed to have been renewed, but it did not yield now as it had done in the first instance; on the contrary, as the first brush of illness appeared to decline somewhat, other symptoms made their appearance. Of these the most prominent and distressing were attacks of violent pain referred to the region of the stomach, but which I believe to have been situated in the colon. These attacks came on at uncertain intervals, and at the end of a fortnight they seemed rather to have declined of themselves than to have yielded to the treatment adopted. In the mean time the patient had lost flesh out of all proportion with the duration of his illness; his sleep had gone astray, and his appetite

was completely at a stand.\* The tongue remained furred, but there was no excitement whatever of the pulse, which had now become very weak and languid. He remained in this state between three and four months, during which period he was subject at times to paroxysms of the most violent coughing, in one of which he threw up a good deal of blood. He finally recovered completely, deriving great advantage from change of air and stimulants, and at the present moment is quite well.

Climacteric disease established itself more rapidly in this case than any other which has come under my notice. It is of course highly probable that it would have come on a little later without any apparent cause, but certainly the cause stated above seemed to act at once as the starting point. The case was one of considerable interest, for two medical gentlemen who saw the case could not be persuaded but that organic disease must have existed. The result of the case showed, I think, that this impression was erroneous. The mind of the patient, which I should have alluded to before, was, during the existence of the attack, in a truly pitiable state. He was naturally of an anxious turn, and what between his own bodily sufferings and the anxiety about his business, his mind was brought to a state of gloom and despondency which I really can find no words to express adequately.

CASE IV.—A lady, of about 30 years of age, and unmarried, began to complain of general weakness of the frame. It was soon accompanied by impaired digestion and periodic headaches of a very severe character while they lasted: at times these were accompanied by a sense of giddiness, to such a degree that the patient was in danger of falling. After having lasted about six weeks these head symptoms subsided, but only to be followed by others referrible to the chest. She now began to suffer from violent fits of dyspnœa, coming on always during

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\* The expression of his countenance too changed so much, that actually some of his friends were unable to recognize him.



the night, and most frequently at a particular hour: she had also, at very uncertain intervals however, attacks of palpitation of the heart, which were most distressing to her. The fits of dyspnoea were so urgent, when at the worst, that she was obliged to leave her bed, and have the windows of the bed-room thrown up, literally gasping for air. These symptoms were slightly relieved by treatment, yet they persisted for rather more than four months, when a sea-voyage, together with medicine, of which the gum resins formed a large part, seemed to restore her health; but it was a much longer period before she could be said to be completely recovered. It may be well to observe, that this patient was naturally any thing but of an hysteric temperament, nor was the menstrual function at any period of her illness deranged. The peculiar expression which her countenance assumed has not yet left her, though four years have now elapsed.

This was a well-marked example of climacteric disease, as it is usually met with in the female. It will be observed that the symptoms were not of that persistent kind which is seen in men: neither did the mind seem to suffer as much as in them; nor yet did the attack, at least in its severity, last at all so long as it commonly does with them.

CASE V.—A gentleman, upwards of 40 years of age, of a highly intelligent and refined mind, had been annoyed for a period of two months with flying pains through different parts of his body, but more particularly affecting one or other portion of the spine. During this period he was observed to fall away in flesh, though his appetite was not impaired. It was now that something went wrong with his business, and he was immediately seized with head symptoms of a very serious character. Fits of giddiness and violent headach came on, which were followed by paralysis of one half of the body, together with great thickness and difficulty of speaking. To those symptoms were added the others which I have so often had occasion to repeat: the sleep was broken without any apparent cause, there was

marked derangement of the digestive system, with constipation of the bowels; and the mind not only became desponding in the extreme, but it was also perfectly childish, the patient on several occasions becoming actually hysterical. The treatment adopted was such as would benefit the more ordinary forms of paralysis, but here it seemed perfectly useless, and after having been persevered in for more than four months it was given up, the patient having got tired of trying what appeared to do so little good. He was now advised to give up all local treatment, and in place of it to go to the country, and try a course of tonics with stimulants. This line of treatment seemed at first only to aggravate the symptoms, particularly the use of the stimulants, the patient being naturally of a highly nervous temperament. In a short time, however, the system got accustomed to their effects, and then all the more serious symptoms, including the paralysis, began to decline, and at the end of about fourteen months this patient was restored to all his powers, both bodily and mental.

This was a very well-marked example of one of the varieties under which climacteric disease shows itself. In a preceding part of this Paper I have alluded to the importance of distinguishing this affection from the more ordinary forms of brain disease, and also the great liability which exists of adopting treatment directly the reverse of what is right. I believe, in fact, that the symptoms depend on a deficiency of the nervous energy, and not upon those of either congestion or inflammation. Hence the treatment ought to be some modification of the stimulant. The paralysis which existed in this instance was not complete, and indeed this is one of the most important distinctions between the two cases. Two other instances, which were precisely similar, as far as regards the paralysis, have come under my notice, but I do not think it necessary to detail them here.

The five preceding cases appear to be sufficient to give a general idea of the forms under which climacteric disease usu-

ally presents itself. I could detail a number of other instances, more particularly where the stomach seemed to suffer the most, but the length to which this paper has already run must, for the present at least, forbid it. I would just observe, however, that while the great leading features of the affection seem to be the same in all, there is, as far as I have seen, an endless variety in the minute symptoms of each individual case.

It may be well, in conclusion, to throw into a series of propositions all that is at present known on this subject.

1. That there exists such an affection as climacteric decay or disease.

2. That this point is proved by the peculiar nature of the symptoms, by the usual progress of the disease, by the complete recovery of the patients, but, above all, by the fact, that the disease is by no means uncommon in early life.

3. That of the remote causes of the disease nothing is known; but that its immediate causes may be, and often are, the following:—a slight cold, a fall, a bilious attack, anxiety of mind from any cause, a debauch. That it often comes on without any assignable cause.

4. That climacteric disease usually begins in a very slow and insidious way, but that it may commence much more rapidly, under which circumstances it is very likely indeed to be mistaken for organic disease.

5. That it may prove fatal in early, but still more frequently in advanced life.

6. That it commonly occupies a period of nine months.

7. That it would seem to be as frequently met with in women as men, but that it is seen better marked in the latter.

8. That the greater number of those attacked recover completely, but that, under some circumstances, the effects of this disease are never after entirely shaken off.

9. That during the first half of its progress the symptoms present an unusual obstinacy to treatment; but that during the latter half medical treatment may be of essential benefit.



10. That the best treatment seems to consist in giving confidence to the patient, in a change of scene and air, and in combinations of medicines, of which stimulants, tonics, anodynes, and purgatives form the principal part.

ART. X.—*Cases of Aneurism of the Aorta*. By ROBERT LAW, M.B., A.M., M.R.I.A., Professor of the Institutes of Medicine in the School of Physic in Ireland; Physician in Ordinary to Sir Patrick Dun's Hospital, &c. &c.

[The pathological specimens of the following cases were exhibited at the Pathological Society.]

SINCE the publication of my Observations on the Diagnosis of Aneurism of the Aorta in a former number of this Journal, two cases of this disease have come under my observation, which, from their exhibiting in a very striking manner the peculiar character of pain, to which I have already directed attention, and from other interesting features which marked them, I deem a suitable sequel to these observations. In both cases the same obscurity attended the diagnosis in the early stage of the disease, and in neither was it recognized till the subjects came into hospital. One had been treated (as most of such cases have been) as rheumatism, and with the usual measure of success, viz. a short and passing relief, from stimulating applications to the seat of the pain. The other had been for a short time in hospital, but was soon discharged without any relief. From the account he gave we suspect the story of his pain was not credited, and that he was treated as a *malingerer*, but to which he had but little pretension.

CASE I.—*True Aneurism of the ascending, and Arch of the Aorta; false Aneurism of the descending Aorta bursting into the Cavity of the Pleura*.

Garrett Walsh, aged 62, slater; a large, brawny, athletic man; admitted into hospital November 29, 1842. He says

that, although he drank freely, and often had occasion to use mercury for syphilis, he enjoyed good health till a year ago, when he fell from a height of about eight feet, and struck his breast against the end of a ladder. When asked what was the precise point struck, he refers to a point about two inches above the left mamma, and nearer to the sternum. He was not obliged to give up work till within the last three weeks; still he has been for some time suffering pain in the chest, especially in the evening.

The following are the signs exhibited on admission: marked venous congestion of the neck and of both arms, especially the left; percussion yields a dull sound at the upper part of the sternum, and extending to the right side; posteriorly the left side seems to be a shade duller than the right. When the hand is applied to the second intercostal space over the anterior left, it discovers an obscure pulsation, which becomes very plain to the stethoscope placed here. Both in this position, and corresponding to the dull sound at the top of the sternum, there is a distinct impulse, with two sounds like the sounds of the heart, but becoming weaker according as the stethoscope is moved nearer to the cardiac region. The respiration seems to be a shade weaker in the left than in the right side. The heart is quite regular in its action, beating very quietly. Pulse equal at each wrist. Voice hoarse, also his occasional cough. No stridor in the natural respiration, but a full inspiration produces it. Deglutition of solids alone difficult: he refers the obstruction to the lower part of the sternum. He complains of a sharp, lancinating pain darting through his chest, from the sixth rib on the left side to the base of the scapula. He has had no paroxysms of dyspnoea, but is sometimes roused at night by severe fits of coughing. He is much distressed by flatulency; bowels very torpid.

*Diagnosis*.—Aneurism of ascending arch of aorta.

R̃. Pil. Foetid. Composit. gr. xii.

Muriat. Morphæ. gr. i. M.

Ft. pil quatuor. Sumat unam 6tâ quâque horâ.

December 5. He states that he felt something give way in his chest, with a distinct sound, during the night. There is, at present, a distinct, heaving, internal motion corresponding to the left subclavicular and supra-scapular regions. From this period, for several months, there was but little variation either in the physical signs or constitutional symptoms. All the variety consisted in the pulsation becoming more distinct and his complaining more of pain, which he generally referred to the supra-spinatus fossa, but which he accounted for by a blow which he had received there from a constable's staff. Although the intensest pain was felt here, there was scarcely a point of the left side where he did not feel it more or less, and at his own request he had the side generally covered with blisters. The difference in the respiration in the two sides became more marked, although as yet there was not a very decided difference in the results of percussion. The impulse, too, both posteriorly and anteriorly, was accompanied with a double sound. We could not account for all the phenomena on the supposition of a single aneurism, we, therefore, expressed our conviction of there being more than one. The difficulty we had about the impulse felt posteriorly, was, the fact of its being attended with a double sound, which our previous experience had only found to attend aneurisms of the portion of the aorta on which the pericardium was reflected; and as there was no conceivable direction that an aneurism of the arch could take, and produce the phenomena we had to account for, we inferred the existence of a second. Our treatment consisted in the occasional exhibition of purgative pills composed of calomel, aloes, and assafoetida; and in the habitual use of pills of muriate of morphia and assafoetida, which relieved both the pain and the flatulency, which distressed him very much. His appetite was good; and he got a liberal allowance of animal food and porter.

He continued in hospital till July, when he found himself so much easier, and the weather being fine, he thought he would try how he would get on at home. He continued out of



hospital till September, when he returned, but not on account of any unfavourable change in his symptoms, but to procure the comforts and medical treatment, that he could not have at home. Our report on September 10 was: "he says his breathing is much improved. The left side of the chest, at its superior part, is much more prominent than the right. Both infra and supra-clavicular spaces filled up. And here is a very distinct pulsation with a double sound. The superficial veins of the left side of the neck and chest, and of the left arm, are greatly enlarged, while the fore-arm and hand are of a deep livid hue. He has a sense of numbness in both hands, especially in the left. Pulse weak, but regular, and equal in both wrists. He is subject to sudden weaknesses, and to a disposition to syncope. There is scarcely any respiratory murmur to be heard in the left subclavicular region, as far down as the third rib. Percussion yields a somewhat duller sound in the posterior left than in the right side; the respiration here also is more feeble than in the right. Double pulsation heard all through both sides posteriorly, especially in the left. He has no cough. Voice hoarse. Has no paroxysms of dyspnoea. He complains of pain in different parts of the chest, but refers it most frequently either to below the mamma, or to the supra-scapular region, where he received the blow. He retains his old predilection for blisters, and is never satisfied unless when he has on one at least. The heart's action is quite regular. He continues to derive much benefit from his two kinds of pills; purgative, and those composed of morphia and assafoetida. After stopping six weeks in hospital, he again went out, feeling himself pretty well. However, before he left, we observed that the pulsation in the left subclavicular region was more marked with its distinct double sound; percussion also yielded a duller sound in the posterior left; where the double pulsation was also very palpable. The respiration here, too, was much more feeble than in the opposite side. Its intensity was much increased by a full inspiration, so that we

constantly observed that we never missed the respiration posteriorly, however feeble it was, in contrast with its entire absence anteriorly in the subclavicular space. The plain inference from this was, that the lung was always interposed between the tumour and posterior side of the chest, while it seemed to be displaced altogether anteriorly. He had entirely lost all difficulty in swallowing. He was never without a deep, hoarse voice. He re-entered the hospital, October 27, loudly complaining of oppression of his breathing and of beating of his heart. He referred his chief distress to the epigastrium and cardiac region. The physical signs had altered considerably; there was a much more palpable fullness in the left subclavicular region, with a very strong double pulsation, which caused a heaving motion of this part of the chest. The sound here was very dull; and there was not a trace of respiratory murmur. The sound posteriorly along the base of the left scapula was dull, and the double pulsation was heard though a feeble respiratory murmur, with sonorous and sibilant râles. The congestion, almost amounting to a varicose condition of the veins of the left side of neck, chest, and of left hand and arm, had quite disappeared. The night after his admission he experienced the sensation of something giving way in his left side, when he immediately felt as if he was dying; his pulse failed; his extremities became cold; his lips were quite blanched; and he was bathed in cold clammy perspiration. Cardiac mixture (composed of camphor mixture, carbonate of ammonia, and Hofman's anodyne), and heat applied to the feet, revived him. At our visit next morning, we found him in a very low, depressed state; the pulse at the wrist very feeble; his tongue very much loaded; the pulsation in the subclavicular region very weak in comparison with what it had been. We dreaded the effects of any motion in examining him, as we had no doubt of some serious internal mischief having taken place, and were equally certain that this mischief consisted in an internal hæmorrhage. His sputa were tinged with blood.

October 31. He is still very low and weak. Pulse stronger, and fuller in the left than in the right wrist. The subclavicular pulsation still comparatively feeble. Heart's action quite regular.

November 4. Complains much of oppression of his breathing. He says, he has quite lost the sharp pain that he used to have, but feels in its stead a dull aching sensation all through the left side.

9th. Pulsation under left clavicle much diminished. He feels himself almost quite relieved of the weakness and depression under which he has laboured for several days. Whatever oppression he feels he refers to the top of the sternum. Sonorous and sibilant râles heard through anterior left.

20th. Breathing very much oppressed. Dulness on percussion through almost the entire anterior left side to its base. Heart's action normal, but heard at the right side; very slight pulsation under left clavicle. Universal dulness through all posterior left, especially in inferior half. Distinct double pulsation along the posterior margin of the scapula, heard through a feeble respiratory murmur mixed with bronchial râles.

*Adhibeantur hirudines sex summo sterno.*

21st. His breathing is much relieved, still he can only lie on his back with any ease.

24th. The pulsation under the clavicle much stronger than it has been for some time. Dulness on percussion of the upper part of sternum and left subclavicular region. No trace of respiratory murmur in this situation. To one hand placed on front of the left side, and another posteriorly along the base of the scapula, there is conveyed a distinct heaving sensation. The antero-posterior diameter of the chest in this position is much increased. He says he is quite free from pain. He continues to take his pills of morphia and assafoetida, with the addition of a grain of ipecacuanha to each.

28th. Pulsation very strong under the left clavicle, particularly towards the shoulder. It communicates a visible



motion to the entire side. Complete dulness of all the posterior left side to its base. Has had return of what he calls the sharp nipping pain, which he refers chiefly to the left mamma, and to behind the point of the shoulder, towards the spine. He has much difficulty in expectorating. In the course of the night he discharged from the mouth at once, about a pint of florid frothy blood, and in the effort to get up more, which could be distinctly heard gurgling in his throat, his face became quite livid, he fell back and expired.

*Examination of the Body twelve Hours after Death.*—On carefully dividing the cartilages of the ribs on the left side, some fluid blood, or rather bloody serum, escaped from the pleural cavity. The sternum being removed, this cavity was seen to be divided into two distinct compartments; one very large, occupying the two inferior thirds, and filled with serum, deeply tinged with blood, with large, loose, coagula of blood in it. There were at least three pints of this bloody fluid. The internal surface of this cavity was coated with lymph, deeply stained with blood, and which could be detached in shreds. We proceeded to examine the aorta, by separating it from the spine, just where it leaves the thorax to enter the abdomen, and about four inches above this we came upon a large tumour, lying upon the left side of the bodies of the vertebræ, and extending up a considerable way. It required great force to detach it from its posterior attachment, and the hand, passed behind it for this purpose, came into immediate contact with the rough, eroded vertebræ. The tumour extended into the left side, and had contracted a firm adhesion posteriorly with the second and third ribs, near their articulation with the spine, and had caused an erosion of these ribs. We now directed our attention to the heart, which occupied its normal position, and exhibited its natural dimensions. The aorta, however, immediately from its origin at the heart to the termination of the arch, was dilated to nearly three times its natural size, and was converted into a complete osseous tube. This change of struc-

ture extended into the branches proceeding from the arch. There was a uniform dilatation of its circumference, which reached near to where the left subclavian artery was given off. On opening the aorta, in its posterior wall, just where its descending portion begins, there was to be seen a circular opening, with smooth, rounded edges, nearly as large as a half-crown piece, which led into a large cavity extending up into the top of the left side of the thorax, and also downwards, and occupied by the tumour, which we before remarked, and which consisted of large masses of lamellated fibrine. The lining of this cavity was a rough, scabrous, irregular membrane, differing very little in appearance from the diseased internal coat of the artery, and with which the fibrine was connected; some masses were attached to it, as it were, by pedicles. The dilated aorta had pushed aside and downwards, the apex of the lung, while the organ appeared to be spread upon the tumour. It was reduced to a thin plate of pulmonary tissue, interposed between the tumour, and the side and posterior wall of the chest. From a little above its base there was a cellular, adhesive band connecting the pleura pulmonalis and costalis, and which divided the side of the chest into the two compartments to which we have already adverted. This adhesion formed the floor of the upper cavity, and on it rested a large mass of fibrine, enveloped externally by the lung; while it was the roof of the inferior cavity. We could not discover any rent by which the upper and lower compartments communicated; but we did find one which admitted a probe from the upper cavity, through its rough, scabrous lining into the lung. The left bronchus was filled with blood. The left side of the bodies of the six upper dorsal vertebræ were extensively eroded; their cartilages much less so. The internal coat of the aorta, from where we commenced our examination, viz. where it leaves the thorax, to its origin, was the seat of extensive atheromatous and osseous degenerescence. This condition was most marked in the ascending portion, which formed the true aneurism, and in the descending portion, from whose

side the false aneurism arose. The trachea was but slightly pressed upon, and this pressure seemed to arise from its being engaged between the dilated arch of the aorta and the highest portion of the aneurismal tumour, which was attached to the sides of the vertebræ. There was no apparent pressure on the œsophagus.

This most interesting case presented many features well worthy of consideration. It afforded us an instance of the co-existence of true aneurism, involving all the coats of the artery, and one from rupture of the internal and middle coats, and beginning so immediately at the point where the dilatation of the artery ceased, that there existed an almost uninterrupted continuity between them. This relation of the two aneurisms contributed to render the diagnosis somewhat more difficult. The dull sound at the top of the sternum, with the double pulsation, added to the venous congestion of the neck, thorax, and left upper extremity, satisfied us of an aneurism of the ascending aorta. But when the pulsation became distinct posteriorly, and was also double, it was this that perplexed us. For we could not conceive it possible that an aneurism only engaging the ascending and arch of the aorta, could take such a direction as it must needs do to present the phenomena that we had to account for. Still when we attributed this posterior pulsation to a second aneurism engaging a different portion of the artery (which the explanation of the phenomena required), we did so in despite of our experience of the invariable singleness of the pulsation, whenever aneurism arose from any other part of the artery than that upon which the pericardium was reflected, as was noticed, we believe, first by Dr. Hope. The double aneurism accounted sufficiently for the posterior double pulsation. The relation of the true aneurism to the trachea is interesting, as exercising very slight pressure upon it, and therefore not producing the ordinary stridulous breathing so common when the aneurism engages the ascending aorta; which we attribute to the second aneurism attracting to itself the force of the circulation, and



thus relieving the dilated portion. We would also observe, in confirmation of this, that the hoarse, raucous voice, and stridulous breathing, were more marked at an early stage of the disease than afterwards; and the congested condition of the veins, which constituted so striking a feature at first, and which served as one of the principal diagnostic marks, latterly entirely disappeared; both which phenomena must, of course, have been due to a change in the true aneurism, by which its pressure on the parts became less. While the trachea was relieved, the lung suffered, from being compressed between the side of the chest and the pulsating tumour; and it was found, that according as the pulsation became more distinct, the respiration became more feeble. The interposed lung always, to a certain extent, rendered percussion uncertain as regarded the tumour.

One of the most remarkable circumstances of the case is the long interval that elapsed between the attack, which, from the nature of its symptoms, must have been a rupture of the aneurism and a consequent hæmorrhage, and the fatal termination. The large cavity, filled with bloody serum and coagula, exactly resembled a circumscribed pleuritis; and had it not been for the unequivocal signs of hæmorrhage that he exhibited a month previously, and those followed by an increasing oppression of his breathing, we should have regarded it as a case of circumscribed hæmorrhagic pleurisy. We suspect the hæmorrhage into the pleural cavity was very gradual; and we would account for the lymph that coated it in the same way as in ecchymoses lymph forms round the effused blood. That death should follow immediately on the last rupture of the aneurismal sac, is no matter of wonder, when we consider that it took place into the lung.

The appearance exhibited by the artery in this case was such as would naturally lead to the disease. We can easily imagine that this arteritis was produced by the different accidents he met with, operating on a constitution deteriorated by intemperance. We would remark, that the two accidents to

which he referred his ailments, viz. the stroke of the ladder against the chest, and the blow of the constable's staff on the shoulder, corresponded as nearly as possible with the internal position of the two aneurisms. We have so often met with this disease attributed to accident, that we believe it to be a frequent cause of it. The absence of any abnormal sound in either aneurism is in exact conformity with our experience of aneurism of the thoracic, as contradistinguished from that of the abdominal aorta.

We have not much to say on the subject of the treatment. The medical treatment was very simple, as the indications were very few; still we doubt if there be any case in which such agonizing torture admits of greater alleviation. We cannot speak too highly of the combination of morphia and assafoetida in relieving the pain and the flatulency, so constant and so distressing in this disease. The comfort and ease of the patient were also very dependent on attention to his bowels, which always responded to the purgative pill, composed of calomel, aloes, and assafoetida. With regard to diet, we found that he was always worse when we attempted to restrict him; we therefore gave a liberal allowance of meat and porter. We believe experience has now fully established the superiority of this dietetic management of aneurism over even a modification of Valsalva's method, and not alone upon the grounds that such a method conduces to an imperfect sanguification and to the formation of blood deficient in fibrine, and therefore little disposed to coagulate, and so lessening the prospect of a radical cure, which, however problematical, should ever be regarded as possible; but also because that it induces a nervous state of the system, which affecting the heart, hurries its action, and may thus cause injurious effects. We have already observed how the disease itself requires no adventitious aid to produce this nervous irritability, as we have seen the strongest man exhibiting as marked hysteria as we ever witnessed in the most delicate females.

CASE II.—*Aneurism of the Abdominal Aorta opening into the left Pleura, and compressing the left Lung and Heart.*

Robert Harris, aged 35, of a thin, spare habit, labourer, was admitted into hospital February 20, 1843. He states that three years ago, while ploughing, he was suddenly seized with pain across his loins, which has quite disabled him ever since. He describes the pain as darting down to his hips and left groin, and into the left testicle. He has tried many remedies for it, but which never afforded him more than temporary relief. It was always taken for and treated as rheumatism. It comes on with tolerable regularity every evening about nine o'clock, and continues for several hours. Besides this intermitting acute pain, he suffers from a constant, dull, aching pain. The description he gave of his pain led us to suspect an aneurism, and on applying the stethoscope to the epigastrium, a distinct, soft, musical souffle was heard mid-way between the ensiform cartilage and the umbilicus. Pulse 84. Heart's action regular. His appetite is bad. Bowels very torpid. He suffers much from flatulency.

The repetition of our examination next day not only established the presence of the souffle, but also discovered a distinct pulsation between the last rib and the ilium. He was ordered the following pills:

R̄ Pil. Fœtid. C. gr. xii.

Muriat. Morphiæ, gr. ii. M.

Fiant pilulæ quatuor; una 4tis horis sumenda.

*Report.*—March 7. He is at this moment suffering agonizing torture from pain darting down the back and left thigh. Countenance bespeaks the greatest distress. The epigastric bruit is much stronger, while the pulsation between the last rib and the ilium is more feeble. Pulse 74, small and contracted.

Habeat Extract. Opii aquos. gr. i. 2dâ quâque horâ.

8th. Pulse 84, soft and weak. He suffered intense agony from nine o'clock last night till five this morning. Epigastric



pulsation strictly confined to median line, neither to the left nor right, nor above nor below a space which the circumference of the stethoscope covered. The posterior pulsation between the last rib and ilium very distinct. Countenance very anxious. Bowels very confined.

Adhibeatur lumbis Vesicat. Muriat. Morphiæ, gr. ii. sparsum. Enema purgans. Four ounces of Mutton; six ounces of Wine.

9th. Had no return of pain last night. Epigastric pulsation weaker. Countenance much more composed.

10th. Pulse 90, small and irregular. Was seized with distressing pain early this morning, which he describes as a hot, burning sensation passing down the left thigh. Stomach irritable and sour.

℞ Mist. Amygdal. ℥ vii.  
 Liquoris Potassæ.  
 ——— Opii Sedativ.  
 Ætheris Sulphuric.  
 Spirit. Ammon. Aromatic. sing. ℥ i.  
 Syrupi Aurantii, ℥ ss. M.  
 Sumat cochl. ii. ampla 3tiis horis.  
 Arrow Root seasoned with Brandy.

For several days the pain has been relieved by camomile stupes applied to the back, and opium taken very largely.

17th. He suffered great agony last night, which he referred chiefly to below last rib and ilium, but far back towards the spine. As long as he remains quiet he is comparatively free from pain, but whenever he attempts to change his position the motion immediately causes suffering.

Our reports for several days presented but little variety, telling merely the same story of great suffering, from the constant aching and the intermitting short pain, described as a hot, burning sensation, principally proceeding down in the direction of the left thigh and groin. Opium, largely administered, afforded but little relief, and never produced even the slightest

tendency to narcotism. The epigastric bruit altered but little in its character, and the pulsation posteriorly became stronger.

27th. We now, for the first time, missed the bruit in the epigastric region, while the pulsation between the last rib and ilium has increased much in intensity, communicating a strong impulse to the side. Heart's action stronger, and, if I may use the expression, more irritable. Pulse 84. Complains of tenderness when the left side of abdomen is pressed. He has suffered what he calls severe "shots" of pain through the left thigh, groin, and into the left testicle, although he has taken eight grains of opium within the twenty-four hours.\*

Enema e Decocti Amyli, ℥ii. et Tinct. Opii, ℥i.

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\* We content ourselves too often with merely calculating the number of the pulse, without examining the heart itself, an examination which discovers to us what could not be learned from the pulse. What we have designated an irritable action of the heart consists in a very short contraction of the ventricle, and is best expressed by the French word *vif*. Such is the constant character of the heart's action in the class of diseases which, from the disturbance they produce in the vital functions, have been termed diseases of constitutional irritation, such as phlebitis, inoculation with an animal poison, &c. In such cases but a single short sound can be heard, and, as has been observed, it very closely resembles the action of the foetal heart. This character of the heart's action may consist with a pulse not more frequent than natural, but it is in general accompanied by a rapidity of pulse not met with in any other disease, with the single exception of hæmorrhage. In some of these cases we have counted the pulse at the wrist at 200 in the minute. We have never met with even an approximation to this frequency of pulse in uncomplicated fever, and then we have met with it even before we have had other evidence of hæmorrhage, we have always suspected this was coming,—a suspicion which has always been confirmed by a discharge of blood from the intestines. We have not much difficulty in understanding why the diseases of constitutional irritation and hæmorrhage should agree in producing this rapid pulse; for, in fact, hæmorrhage causes the same derangement of the nervous system that those diseases do. We can discover in this rapid action of the heart after hæmorrhage an effort of the *vis medicatrix naturæ*, endeavouring to make amends for the small quantity of blood sent forward at each pulsation by sending it often. And we have sometimes seen persons who largely employed depletion to subdue inflammation, mistake the rapid pulse which they had caused by such depletion for the effect of the inflammation not yet extinguished, and deplete

28th. Bruit returned to the former position in the epigastrium.

30th. At five o'clock this morning, when getting out of bed, he was seized with a sudden feeling of faintness, followed by a general agitation of the entire body. He felt a sensation as if there were some oppressive load of which he vainly tried to relieve himself.

10 o'clock, A. M. His countenance bespeaks the deepest anguish. He complains of severe pain in the left side of the abdomen, which is full and hard, and dull on percussion. There is no bruit de soufflet in the epigastrium, nor heaving of the side as formerly. Heart's action quick (*vif*) and irritable. Pulse weak and dicrotous. Stomach irritable. The slightest pressure, even to touch the left side of the abdomen, down to the thigh, causes great pain. There is no dyspnœa.

Fomentatio Anthemidis abdomini. Extract. Opii, aquos. gr. i. omni horâ. Soda Water and Brandy.

9 o'clock, P. M. There is no pulse to be felt at the wrist.

31st. He has had a tolerably tranquil night. Pulse has returned to the wrist, dicrotous as yesterday. The only sound heard in the epigastrium is the weak action of the heart. There is no longer any pulsation in the left side. The heart beats with a single stroke and slight pulsation. Face deadly pale, and bespeaking great distress. Great suffering from the slightest touch of the left side of the abdomen, whose dulness on percussion contrasts strongly with the tympanitic clearness of the right side. Although he took nine grains of the watery extract of

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further, and so of course add fuel to the flame. This tendency of large depletory measures to produce derangement of the nervous system, renders the employment of opium in the treatment of acute diseases a nice point of practice in the management of such diseases. We have seen a nascent pleuritis not unfrequently strangled by a single venesection and a full opiate. The degree to which the nervous system mixes itself up with the circulation in the phenomena of inflammation, explains the advantage of such practice.



opium, and a drachm of laudanum in an enema, he had not the least disposition to narcotism.

*Repetatur fomentatio, et Opii granum omni horâ.*

April 1. Pulse 108, stronger. An indistinct bruit de soufflet is now heard in the epigastrium. The pulsation hitherto existing between the last rib and the ilium, in rather an anterior position, now became much more posterior, and nearer to the vertebræ. He has taken nine grains of opium since yesterday, without any tendency to narcotism.

2nd. Bruit de soufflet is now distinct in the epigastrium, but much more diffused than formerly, extending over to the left hypochondrium. A pulsating tumour is now distinctly seen and felt in the left lumbar region. The heart's action is accompanied with impulse and bruit de soufflet. Pulse 108, small and sharp. Face very much drawn, and of a yellowish, lemon colour. Eyes sunk and glassy. Thirst urgent. He has no longer any feeling of tenderness when the abdomen is pressed. There is a remarkable fulness of the left side of the abdomen, extending from between the last rib and the ilium forwards and downwards towards the pubis, and which is peculiarly dull on percussion. He has had no return of the sharp, lancinating pain for five days, although he has taken twelve grains of opium since last visit, without any sign of narcotism. He asks now for some chicken, which I have ordered for him. Three hours after this, while sitting up eating his chicken, and expressing his conviction that he would recover, he fell back and expired.

*Examination of the Body fifteen Hours after Death.*—On removing the sternum a clot of blood was seen to cover almost the entire anterior surface of the pericardium, and to be continued from this upon the greater part of the external surface of the left lung. It was a continuous coagulum of about three lines in depth that seemed to be spread upon these organs, and compressed the lung. This blood had got into the thorax from the abdomen; for, corresponding to the base of the lung, the

diaphragm was pushed up so as to form a conical projection into the chest; and at the apex of the projection there was a small circular opening through which the blood appeared to be oozing.

In order to facilitate our ulterior examination, we removed the smaller intestines and as much of the large as we could conveniently. We then found a large, loose coagulum of blood, occupying the left iliac fossa, extending from the anterior superior spine of the ilium to the pubis. This was shining through the peritoneum. There was also a considerable effusion of blood into the cellular membrane, connecting the peritoneum with the anterior wall of the abdomen, as well as into that behind the bladder. We now directed our attention to the aorta, and found in its course a tumour, bound down to the spine by the crura of the diaphragm. This tumour did not rise much above the level of the vertebræ. On slitting up the anterior wall of the artery, just opposite the coeliac axis of vessels, we discovered in its posterior wall a circular opening with smooth edges, about the size of a half-crown piece. This opening led to the tumour, which lay in a cavity hollowed out of the vertebræ. It was a mass of lamellated fibrine, and appeared to be equal in its vertical and transverse diameters, being about four inches in length and breadth. Posteriorly it lay upon the bare eroded bones. The cavity in which the tumour lay occupied the bodies of the two last dorsal and the two first lumbar vertebræ, while at each side it was formed of cellular membrane, which was whole and entire at the right side, but appeared to have given way at the left. A large, dark coagulum of blood effused into the cellular membrane, behind the peritoneum, filled up all the space at the left of the spine, from the diaphragm down to the attachment of the psoas muscle. This coagulum formed a perfect mould of the parts. It completely enveloped the kidney; and infiltrated into the substance of the psoas muscle of, made it, by its full, swollen appearance, contrast strongly with the muscle of the opposite side. It also was infiltrated into the cellular tissue,

which, in the absence of the peritoneum, connects the posterior surface of the descending colon with the anterior surface of the kidney. It was the superior part of this coagulum that pushed up the diaphragm, and supplied the blood that was effused on the lung and heart. In this clot could be seen the nerves proceeding from the spine, as well as cellular filaments traversing it in various directions, and which appeared to hold the mass together. Its firmness was not uniform, being much greater more externally than nearer to the spine. The heart was perfectly healthy. Its left ventricular cavity alone was smaller than usual, but this was due, no doubt, to the hæmorrhage before death; for it admitted of being enlarged by very little force. There was no disease of the aorta through any part of its course.

This case suggests many interesting considerations. It confirms the importance that we attached to the peculiar double pain that we have already noticed as so constant in certain aneurisms of the aorta. It was its existence that led us to look for aneurism, and to suspect that the case was not, as it had been regarded, one of rheumatism.

Since our observations on Aortic Aneurism have been published, some very interesting cases of exostosis of the spine have been published by Dr. Francis Battersby; in one of which he states that the nature of the pain coincided exactly with that which we have described as pathognomonic of aortic aneurism arising from the posterior part of the artery. Dr. Battersby's single case that exhibited this coincidence of pain, does not detract much from the value that we have attached to this symptom, from the rarity of such cases, compared with aneurism of the aorta causing disease of the spine, and from the absence of other ground for suspecting aneurism—especially the bruit de soufflet, which we have found to be constant in aneurism of the abdominal aorta. It is only when it becomes a question between aneurism of the thoracic aorta and exostosis of the spine, that we might be embarrassed, where we have the usual bruit de soufflet as constantly absent, as we have it present in aortic aneurism. Dr.



Battersby's case, added to one which I have recently met with, which proceeded from the front of the abdominal artery, and in which the occasional intermittent pain was present, and where there was no affection of the bone, answers a question which I proposed in my recent observations, viz. upon the lesion of what structure or tissue does this twofold pain depend? I expressed my opinion, that while the occasional lancinating pain was due to the affection of the spinal nerves, the continued aching, boring pain, was caused by the affection of the bone: the correctness of which opinion these two cases seem to prove.

Another point of interest in this case is the succession of hæmorrhages that seem to have taken place at more or less distant intervals, and which were marked by distinct symptoms during life, and appeared after death in the different degrees of firmness of the different coagula. The most recent unquestionably was that effused on the lung and heart; the next seemed to be that which extended from the ilium to the pubis, and which appeared to be continued from the most external part of that which ranged along the spine, while the internal part of this was the least consistent, and was probably of the same date as that which penetrated into the thorax. Of course the tumour, composed of lamellated fibrine, and which lay on the spine, constituted the original disease. I am inclined to believe that at the time that he presented himself first at the hospital, the original aneurism had given way, and that the pulsating tumour, which soon after his admission exhibited itself between the last rib and the ilium, was the result of it. This pulsation gradually increased, till symptoms occurred plainly indicating a hæmorrhage. Now the flattened tumour, extending from the anterior superior spine across to the pubis, presented itself. From this time the pulsation changed its position, becoming much more posterior and nearer the spine, till his sudden death: and the looser condition of the part of the coagulum next the spine, continuous with the effusion into the thorax, coincided exactly with this altered direction of the pulsation. The death in this case

would seem to be the mixed result of hæmorrhage, and of the compression of the important organs upon which it was exercised. The abdominal organs bear pressure better than those of the thorax, and therefore furnish fewer symptoms towards the detection of the disease.

We have only a single observation to make relative to the treatment:—that there is scarcely any limit to the extent to which we may exhibit opiates without their producing narcotism. The only other case in which we exhibited anything like the same amount of this remedy, without its producing, not to say narcotism, but any effect whatever, was the case of a nervous female, who laboured under hysterical mania. She took a drachm of Bentley's sedative in the course of an hour, without its producing any effect.

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The preceding cases, added to those which we have already adduced, warrant us in drawing the following inferences:

When aneurism arises from the posterior part of the aorta we generally want the evidence of a palpable tumour to indicate the disease.

When the tumour is resisted in its development by unyielding structures (as is the case when it arises from the posterior part of the aorta), it produces in these structures changes giving rise to peculiar symptoms, especially to a peculiar character of pain, which, if not exclusively confined to this disease, exists so much more frequently in it than in any other, as to be enough at all times to awaken a suspicion of aneurism. However obscure all other symptoms of aneurism of the aorta, apart the existence of a palpable tumour, may be, still it rarely happens that there are not some, which, added to the existence of the particular pain, may not suffice to make up what this latter may want of an exclusive pathognomonic sign of the disease.

If this pain be connected with the lower dorsal and lumbar vertebræ, and depend upon abdominal aneurism, there will be,

according to our constant experience, a bruit de soufflet in the course of the artery.

If the pain be connected with the upper or thoracic dorsal vertebræ, and be owing to aneurism, it seldom occurs that there is not some difficulty in deglutition, or some obstruction in the respiratory apparatus, either affecting the trachea, and so weakening the respiration in both lungs, or exercised upon either one bronchus or upon one lung, and so producing a difference in the relative form of the respiration in the two lungs. In the absence of the bruit de soufflet (which we have almost always found absent in thoracic aneurism, except where the valves of the aorta were involved in the disease), some one of these symptoms will generally be present to confirm the value of the pains.

The character of the pain consists in a constant, aching, boring sensation, and a sharp, lancinating pain.

To relieve the agonizing pain of aneurism, there is scarcely a limit to the amount to which we may exhibit opium, without producing narcotism.

In the treatment of aneurism, low diet should be avoided, as lessening the prospect of a radical cure of the disease, and as increasing a nervous irritability,—the constant accompaniment of it.

The interval between the fatal termination and the bursting of an aneurism is various, and is much influenced by the importance of the organs which the hæmorrhage may affect. If it burst into the pericardium, and compress the heart, such interval will, of course, be shorter than if it compress a less vital organ. If there have been an adhesion between the laminæ of the pericardium the effusion will be more gradual, and therefore the interval will be longer than if no such adhesion existed, as we have proved by experience. The suddenness of the fatal termination would seem to be in proportion to the extent and suddenness of the hæmorrhage, and the importance of the organ or organs, whose function may be mechanically interfered with by the effused blood.



ART. XI.—*Observations on a peculiar nervous Affection incidental to Travellers in Sicily and Southern Italy.* By J. HUNGERFORD SEALY, ESQ., M.D., A.B., late Resident Physician at Florence, Messina, &c.

THE peculiar disease which I am about to describe I had frequent opportunities of witnessing during my residence in Sicily and Southern Italy.

It is characterized by an excessive irritability, attended with extraordinary mental and muscular activity, and seldom attacks the new comer, but more frequently those who have been resident between two and three years, and not yet acclimatized, and just beginning to suffer from *nostalgia*. In it, a consciousness of disease exists, which is incapable of being expressed, and the mind is disturbed by visions, which the sufferer is almost ashamed to avow; the imagination is morbidly awakened, yet the mind of the patient is still under the control of judgment, yet with scarce a capability of obeying its dictates.

Having suffered much from it myself, and witnessed it in all its stages in others, varying, indeed, from the sublime of fearful, as I saw it in the case of an English clergyman at Messina, to the ridiculous of absurd nervous fancies, in those not previously subject to such hallucinations, I consider myself peculiarly qualified to offer a few remarks on it, which I hope may prove serviceable to travellers in the countries of which I shall treat.

That it is a disease of climate I am well convinced, and that all are more or less liable to it in visiting those countries, my experience has assured me. The modifications of it are, however, great, and the grades various, from slight excitability to serious and formidable disease, affecting the mind and body; it consequently behoves every traveller to be particularly cautious of his diet and general health, and to observe carefully his impressions and sensations, to guard against this insidious and formidable enemy, and, by attacking it at the commencement, overcome it effectually.

To the travellers in Rome, Naples, and Sicily these observations will peculiarly apply.

That it has not hitherto been sufficiently noticed and described, my acquaintance with the literature referring to Italy and Sicily assures me. In fact, little or no notice is taken of it by any of the writers on climate with which I am acquainted, such as Clarke, Johnson, &c.

It seems a hyper-elimination of the nervous principle, a peculiar elastic evaporation, if I may so express it, of a spiritual consciousness and capability, aroused by electrical agency or invisible atmospheric influence.

The imaginative and the sanguineo-nervous temperaments are peculiarly liable to it, and suffer much during the prevalence of the Scirocco wind, particularly at Rome and Palermo, and at Naples and Sicily, when the atmosphere is charged with electricity, or when thunder is brewing, as the vulgar phrase is, and particularly during earthquakes in Sicily.

That all should experience excitement in that elastic atmosphere is little to be wondered at. It forms a considerable part of the charm of travel and climate; it is, however, when that excitement becomes excessive and permanent that it requires consideration and control. No one, I believe, has ever crossed the Alps without finding in himself a sense of elasticity on the Italian side different from the more cloudy atmosphere of the Swiss mountains; and how much more is that experienced on first landing in Naples or Sicily, supposing that the traveller has come by sea. He must be indeed a dull clod of unimpassioned clay who would not feel excited beside the tombs of Tasso or of Virgil, or seated on the rock of *Scilla* contemplating Sicily. In fact, the impression of vigour is so great, as a plain, unimaginative London gentleman expressed himself to me, as we strolled in the *Marina*, at Messina, together, that he felt as if "he wished to knock down every one he met," and although a man of a sobered time of life, and, I have reason to believe, quiet habits in England, he became so excited to mirth, as to

be almost unbearable, and this without the smallest assistance from internal stimulants. The extraordinary rarity of the atmosphere contributes much to this, the force with which impressions are conveyed to the senses; in fact, in Sicily the air is so attenuated and transparent that distance seems almost annihilated, and sounds come on the ear with appalling force; the perpetual ringing of their church bells, and the firing of their *gioco di fuoco* on fete days, is enough to startle the best strung nerves; and the perpetual roaring of their criers about the fish-stalls is truly horrifying. The noises both at Naples and Messina, where the slightest sound is audible, from the tenuity of the atmosphere, is appalling; and yet, curious to say, the natives do not appear to mind it, although they all seem much alive to nervous impressions, which the restlessness of their motions indicates: you never see a Neapolitan or a Sicilian at perfect rest, he is always either twisting his cane or shaking his leg, or contorting himself in some way or other, but absolute rest seems incompatible with his existence. This same excitability the English traveller feels more or less, according to the character of his nervous system.

Some portions of Italy, however, possess this influence much more than others. The difference between Rome and Naples, in that respect, is very striking, and the locality it is, doubtless, which so influences the appearance and habits of the inhabitants. The difference between the two cities may be thus summed up, as regards the stranger. At Rome you are pleased, at Naples you are amused; the hypochondriac is rendered worse at Rome, at Naples he is debarred from gloomy thoughts by the multitude of animated objects around him: the Toledo at Naples is a perpetual Roman Carnival. At Rome you derive your gratification from inanimate objects, and from your own reflections. At Naples you have no time to reflect, your mind is amused and engaged by others; it is a varied and amusing panorama; the gait of the Roman differs from that of the Neapolitan, it is



more slow and solemn. The Corso at Rome and the Toledo at Naples, may be compared to St. James and the Strand in London.

While resident in Florence several cases of this nervous affection presented themselves to me, affording curious, and some of them most amusing traits; but the severest form I ever witnessed of it was in Messina in Sicily, which I shall here relate, omitting merely the name, as the exceeding peculiarity of the mental symptoms of the patient, a talented and most respected clergyman, may render it painful to him to have revived those recollections of the awful times in which I attended him, should this ever meet his eye.

Having arrived at Messina, by steam packet, from Naples, and aware that there was no resident English physician in the island, I was shortly after my arrival waited on by a gentleman, saying, that their resident clergyman was dangerously ill, and requested my immediate attendance, that they had written to Malta for one, the English merchants of the town being in the greatest state of alarm about him, and that they had been most anxiously expecting the arrival of some ship containing one; that the town was quite in a ferment about him, the Church of England Service having been suspended for some weeks. In as short a time as possible I made my call. I found the gentleman in bed, his countenance was haggard and wretched, his eyes glaring out of his head, and deeply suffused and bilious; his skin was dry and parched, and almost verging on the icteroid tint; his tongue was dry, and red at the edges, and covered with a brown fur in the centre and back portion; his pulse was small and quick; and his general expression denoted the deepest misery and suffering, although his mind was perfectly clear. On inquiry, I found he had been ill three weeks, during which time he was under the care of a Sicilian physician, and was gradually getting worse. On inquiring what medicine he had taken, he said very little, and that not of a purgative character, although

he was aware that he wanted it, as his bowels had not been moved for some days. He attributed the attack to an incautious exposure to the sun, that his Sicilian doctor had declared his complaint to be March fever, and was treating him accordingly with large doses of quinine, which he did not fancy agreed with him. He was certainly not getting better, and was very glad I had arrived, as he thought an English physician would see his case in a different point of view from an ignorant Sicilian, and he hoped would be able to do him some good. On further inquiry I found that the only other medicine, beside the quinine, he had taken was infusion of taraxacum, that panacea for all Sicilian maladies.

In a short time I met my Sicilian *confrere* in consultation, and asked him his view of the case; he said it was a simple case of March fever, and would quickly subside under the continued use of quinine and taraxacum, that he had never known them fail. I begged to differ from him, and said it struck me that with such a tongue, and such a gorged state of the chylo-poietic viscera, accompanied with such high nervous excitement, *quinine* was inadmissible, and suggested the use of a smart dose of blue pill, and compound colocynth pill, to excite the biliary secretion. The latter formula he had never heard of; the blue pill he had heard of, but did not believe that there was any in the island, unless I had some, if so, he had no objection to try it. I fortunately had, having been supplied at Naples by my friend, Mr. Jessop, resident English apothecary at that city, with all medicines necessary in general practice in Sicily; and on mentioning the subject to the gentleman, he was delighted at the idea, and said it was, he was sure, the very thing he wanted, that he was poisoned by the Sicilian drugs, which did him no good. I accordingly administered to him a smart dose of each, to the Sicilian's great horror, who thought six grains of each a dose sufficient to kill a buffalo. I ordered, at the same time, leeches to his head, which was hot and throbbing, mustard sinapisms to his feet, the pills to be followed up by a bitter saline mixture

to full purging, and the most perfect quiet to be preserved in the palace where he resided ; this is, however, a difficult matter to obtain at Messina, although his residence was not in the Marina, for between the braying of donkeys and crowing of cocks, beside the ringing of bells and roaring of provision venders of every description, from the exquisite *pesche spada*, or sword fish, to the humble lettuce, Messina is one long continued uproar, deafening, maddening, confusing.

On seeing my patient within twelve hours, I found a considerable improvement ; the medicine had acted copiously, producing several highly bilious stools, attended with such foetor that the gentleman assured me that he could scarcely endure it, that it literally made him ashamed, the effluvia appearing to poison the atmosphere of the whole palace. His countenance was much improved, and his skin had assumed something of a more healthy aspect ; his mind was also much more composed, and his nervous system quieted ; there was no longer that fearful twitching of the muscles, nor consciousness of mental horrors. The case was now clear to me. Mr. — was naturally of a highly excitable and nervo-sanguineous temperament, a benefited clergyman in England, and educated at Oxford, where he had taken a high degree, led away by the enthusiasm of a highly gifted and ardent imagination, he deserted his snug rectory to tread the fields of classical romance and historic renown. On his return from Greece he was induced, by the solicitations of the British merchants at Messina, a numerous and wealthy body, to establish himself there, more with the Christian hope of founding an English episcopacy in the island, where one had never before existed, than with any expectation of pecuniary reward ; and for many months before my arrival in the island he laboured hard in his vocation, admired and loved by a respectable congregation ; nor did I ever, indeed, see in any part of the world a more sincere and deep sympathy exhibited, than was expressed for his miserable situation,—for most miserable it was when I first saw him, and that of his amiable and dis-



tracted lady, whose hands were one moment raised in prayer, at another clasped in silent agony at beholding her beloved husband in such a situation—insanity struggling with reason.

My limits in this Paper will not allow me fully to detail the entire case of Mr. ——. During my six weeks' attendance on him, much curious details of the progress and character of his malady were imparted to me, as he progressed to recovery, for such did take place in my hands, affording me the sincerest gratification of any act of my professional life, and most sincerely did I then, and ever shall, thank God for having been the means of saving the life of this accomplished and truly Christian clergyman, by my accidental arrival in the island.

During the progress of his disease, his mental hallucinations were extraordinary, almost amounting to what the French *mesmerisers* denominate *clairvoyance*, and his visions frightful; his pervading wish, as he expressed it to me, was to tear every thing near him, to shout, to sing, and *curse*; he fancied he saw his limbs leaving his body, and occupying, disintegrated, separate portions of the large apartment where he lay; he was convinced of the unreality of the vision, and of its being the result of a diseased imagination, yet so palpable was the delusive vision that he could scarcely correct the delusion by the utmost effort of reason, or disbelieve the apparently so palpable evidence of his senses.

The bodily disease, separated from the mental hallucination, evidently had its origin in the biliary and chylo-poietic viscera; the turgescence of the hepatic viscus, and engorgement of the *prima via*, as well as the nature of the alvine discharge, indicated this; the relief also afforded by the evacuation of the most foul contents, and the subsidence of the nervous and phantasmagoric hallucinations subsequent to it, fully establish it.

The case was, however, a protracted and critical one, requiring an immensity of care and medicine, to the astonishment and horror of my Sicilian fellow-labourer, who gave me up the case altogether, and retired in disgust at my disregard of the

virtues of the *lion-toothed* taraxacum, shrugging his shoulders at the “dura ilia” of the British.

This case is interesting from the well-marked character of the symptoms, and exceeding severity of the disease ; it was, in fact, the disease in its severest type, and attended with its most appalling symptoms, almost, in appearance, at one time resembling *delirium tremens*, and affording all the symptoms of that fearful malady. The minor modifications of the disease, met elsewhere, were not attended with such severe constitutional symptoms, and, in fact, in many cases where severe and distressing mental hallucinations existed, were unaccompanied by morbid appearances. In fact in many the tongue was clean, although generally white and flabby, retaining the impressions of the teeth for a long time after the mouth was opened, as in hysteria. A Mr. H., who called on me in Florence, had some of the most curious hallucinations it is possible to conceive ; his great dread was to meet the human eye ; he had also an extraordinary inclination for grinning and contorting his countenance, and an utter dread of taking medicine, fearing, as he said, the impossibility of cleansing himself after it. He said it came on at Rome, where he had spent a winter. He was an accomplished and highly educated gentleman, and was fearfully alive to the horrors of his nervous affliction.

A poor woman, whom I also attended at Florence, had an almost uncontrollable desire to murder her children, of whom, she admitted, she was doatingly fond ; it came on her gradually, she said, having been five years in Florence, and that she had not felt it until the two last years. She was, when I first saw her, a picture of suffering and misery. She was seated in her own apartment, on a high wooden chair, with her legs drawn tight into the back rung, and her back bolt upright, not resting against the back of the chair, but seeming almost as if in emprostotanic spasm ; she was trembling violently, and her face and hands bathed with cold perspiration. Her mind was clear, although labouring under a sensation of some impending horror

or apprehension, for which she could not account, and had not the slightest reason. Her habits had been always temperate, and her circumstances comfortable; her husband being a respectable English groom.

In all these cases, and several others I have met, I could always trace the disease to some engorgement of the *chylo-poietic viscera*, and, in fact, I always considered the disease as a modification of hypochondriasis, aggravated by peculiar circumstances, the nervous system being over-exerted by atmospheric influence, while the biliary and digestive was deranged at the same time.

The treatment I have generally found to succeed best is a modification of mercurial and vegetable purgatives, with a modified anodyne and stimulating system of treatment. Under this plan I have generally found my patients recover, or at least obtain relief. Some miserable cases of self-destruction and insanity have, however, come under my notice, which I may detail in my next, with notice of the Medical Institutions of Tuscany and the Papal States.

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ART. XII.—*On the dark abdominal Line, and the Formation of an umbilical Areola, as Signs of Delivery; in a Letter to the Editor of the Dublin Medical Journal.* By W. F. MONTGOMERY, M. D., Professor of Midwifery in the King and Queen's College of Physicians in Ireland.

SIR,—My attention was, within the last few days, called by a well-informed pupil, at present attending my lectures, to a very useful Paper, by Dr. Rose Cormack, in the London and Edinburgh Medical Journal for last February, on the dark line occasionally observable on the abdomen of pregnant and puerperal women, extending from the pubes to the umbilicus, and, sometimes, thence to the ensiform cartilage, “showing that it often depends on other causes than recent delivery;” in which, after



asserting that Mr. Turner was the first who directed attention to this mark, he adds: "In Dr. Montgomery's work on the *Signs and Symptoms of Pregnancy*, there is possibly obscure allusion made to it, when this author says: 'In some cases there is also to be seen, extending between these two points, a brown line, of about a quarter of an inch in breadth, especially in women of dark hair and strongly coloured skin.' It does not, however, clearly appear from the context, that Mr. Turner was anticipated by this distinguished author." And again, at page 130, in a review of Dr. Campbell's recent work, my notice of this subject is spoken of as an "obscure allusion, if allusion at all, it can be called."

In Mr. Turner's Paper, which was published in August, 1842, in the same Journal, he distinctly claims priority to all others, in formally noticing this peculiar mark as among the signs of delivery; to which claim, I am quite ready to believe that he conscientiously thought himself entitled; but, I must add, that the claim was incautiously made, because he might, with very little trouble, have satisfied himself, by a reference to my work on the *Signs of Pregnancy and Delivery*, to which he has referred in the course of his Paper, that I had distinctly noticed the matter, five years before.

Now, Sir, whether my notice of this peculiar sign was so obscure, as to render it doubtful whether I referred to it at all or not, as implied in the above statements, I must leave to you and others to determine, when I shall have laid before you the passages in which it is mentioned. I will only say, that if they are to be considered only as obscure, or equivocal allusions, I shall be more than ever at a loss to know what would be considered as distinct.

At page 296 of my work, above referred to, after describing the broken streaks, pearl-coloured lines, and other marks found on the abdomen after delivery, I have said: "*These marks are sometimes accompanied by a brown line, extending from the*

*pubes to the umbilicus, which will be noticed more particularly presently."*

At page 304, after again noticing these broken lines on the surface of the abdomen, it is added: "*In some cases there is, also, to be seen extending between these two points a brown line of about a quarter of an inch in breadth, especially in women of dark hair and strongly coloured skin.*"

And again, at p. 307, this mark is, a third time, mentioned in these words: "*The brown line sometimes found extending from the pubes to the umbilicus is only of occasional occurrence, &c.*"

Now, Sir, I should think, that after the perusal of these passages, few, who attach the ordinary meaning to the term "context," will be found to adopt the opinion of Dr. Cormack, that "it does not clearly appear from the context" that Mr. Turner was anticipated by me, in the description of this dark abdominal line, as an occasional, but not constant sign, observable in puerperal women.

With regard to my claim to priority in the description of this peculiar appearance, all I will venture to say is, that as far as my reading and research have enabled me to ascertain, it was not enumerated among the signs of delivery by any author, previous to the publication of my notice of it in my work, in June, 1837. No mention of it, as among the signs of delivery, is to be found in Beck's Medical Jurisprudence, up to that date; nor did it appear in that very comprehensive work until the edition of 1842, when, after describing the *lineæ albicantes*, it is noticed, for the first time, in these words: "Along with these, Dr. Montgomery (pp. 304, 307) has *sometimes* noticed a brown line, of about a quarter of an inch in breadth, extending from the umbilicus to the pubes, especially in women of dark hair and strongly coloured skin."\* Which quotation, occurring in a work so universally known and read, as Beck's is, could hardly

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\* See Sixth Edition, 1842, p. 171, Note.

have been expected to escape the attention of any one writing expressly on this subject in the two subsequent years.

In conclusion, I beg to observe, that I have in a few instances observed accompanying the dark abdominal line, another appearance of a similar kind, not hitherto described by any one, as far as I am aware. It consists in a dark-coloured circle, or areola, surrounding the umbilicus, extending in breadth about a quarter of an inch all round that part, and in general, but not always, varying in depth of tint according to the colour of the hair, eyes, and skin of the woman. Unlike the mammary areola, there is no turgescence or elevation of it above the surface of the surrounding skin, neither are there any prominent follicles upon its disk. One specimen of this I saw within the last few days, in a lady with very dark hair and eyes, who had just given birth to a child, which, there was every reason to believe, had been dead nearly a month. The abdominal line was faintly marked, as was also the circle around the umbilicus, and the mammary areola looked faded. The first time I observed this appearance was in 1840, and it was its extreme depth of colour which arrested my attention, while in the act of adjusting a binder on the patient. It is of much less frequent occurrence than the dark abdominal line, but I have never as yet seen it, except in the puerperal woman. Whether it is ever produced under circumstances unconnected with pregnancy, remains, as far as I know, to be determined by more extended observation.

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The following are the conclusions, in reference to this dark line, to which my observations have led me :

1. It is generally, but not always, present in puerperal women, and in women advanced in pregnancy.

2. It is occasionally visible at early periods of gestation. I saw it faintly, but quite perceptibly marked in a lady with very dark hair and eyes, who had just miscarried in the second month. Consequently



3. When it is visible, it is no proof of the woman having been delivered at an advanced period of gestation, or of a viable child, as supposed by Mr. Turner.

4. It is occasionally observable in states altogether unconnected with gestation. In one case, I saw it distinctly marked in a girl of about ten years of age, who was affected with mesenteric disease; and in another instance, I found it well developed in a lady labouring under ovarian tumours and enlarged liver.

5. Its depth of colour is, in general, proportioned to the darkness of the hair, eyes, and skin; but to this, there are many exceptions.

6. It is, in general, more strongly coloured, and more distinctly defined, a day or two after delivery, than before or during labour.

7. Its shade and depth of colour are apt to vary at different times, in the same case, without any obvious or intelligible cause.

8. I have not seen the *umbilical areola* except at the time of mature delivery; but I take for granted, as a matter of course, that it may, like the dark line, be observed during gestation.

“ I remain, Sir, your's very truly,

W. F. MONTGOMERY.

*Molesworth-street,*

*3rd April, 1844.*

## BIBLIOGRAPHIC NOTICES.

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*An Anatomical Description of the Human Gravid Uterus and its Contents.* By the late WILLIAM HUNTER, M. D., &c. &c. Second Edition. Edited by EDWARD RIGBY, M. D., &c. &c. London, 1843, pp. 75. Plates.

THE generally irksome task of criticism assumes quite another aspect, and becomes a gratifying occupation, when, with candour and sincerity, we can offer the author, in recompense for his exertions and labours, the well-deserved meed of eulogy and approbation; and in such a pleasing position we now find ourselves placed.

Dr. Rigby is already well known to the Profession in these countries, not only as the son of one whose name is familiar wherever British midwifery is known, but on his own account also, as an accomplished physician, and successful practitioner, in the great metropolis, and as the author of more than one valuable treatise on subjects connected with obstetric medicine; and on the present occasion he has rendered a most acceptable service to his brethren, by undertaking to place before them a new edition of a work celebrated all over the world, but becoming latterly so scarce that it was only procurable with great difficulty; and besides, although highly valuable, was necessarily deficient in all those numerous facts and opinions with which more modern investigation and discovery has so largely and usefully enriched the anatomical and physiological departments of midwifery.

Originality does not appear to have been Dr. Rigby's aim in re-editing this work, nor, indeed, could it well have been; but he has well supplied, from a variety of sources, referred to in his notes, such information as was required to bring the consideration of the matters treated of up to the level of our present knowledge, and added many judicious and accurate remarks thereon.

At p. 40 *et seq.* the editor has given a full and satisfactory analysis of the more modern opinions on the structure of the

placenta and its mode of union to the uterus, to which he has added a theory of his own, for which we must refer the reader to the work itself.

We perceive, with satisfaction, in his notes on the *decidua*, that Dr. Rigby refers, and most justly, the discovery of the decidual cotyledons to Dr. Montgomery of this city, and we perfectly agree with him in thinking

“That no one can read Dr. Montgomery’s description of them, after that quoted from Dr. Sharpey, and examine the diagrams of Plate V., particularly fig. 4, without coming to the conclusion, that the decidual cotyledons of Dr. Montgomery are identical with the uterine glands of Dr. Sharpey.”—p. 52.

And we must add, that we think it would have been, in Dr. Sharpey, more in unison with the liberal spirit of scientific inquiry, towards one who had anticipated him, had he more fully and candidly acknowledged the previous discovery of Dr. Montgomery than he has done in the very slight and equivocal allusion to it, in his Paper on the subject.

On the whole, we have, in this volume, a most desirable addition to our works of reference. Its size is far more convenient than that of the original edition of 1794, edited by Dr. Baillie. As to the “getting up,” nothing could be more elegant; and of the Plates we cannot speak too highly,—they are at once tastefully designed and beautifully executed; while the price is so moderate, as to place the work quite within the reach of the student, as well as of the senior members of the Profession, of whom, we venture to predict, few will be without a copy of this valuable treatise.

We cannot, however, agree with our author in his doubts (pp. 20, 21) of the reality of the nerves of the uterus discovered by Dr. Robert Lee, and so beautifully represented in his Plates. Having inspected Dr. Lee’s dissections, we are prepared to state our opinion to be in unison with that of Mr. Lawrence, Mr. Stanley, and Sir B. Brodie, as expressed in their letters on this subject, viz. that Dr. Lee has succeeded in displaying ganglia and nerves, of which he has given correct representations.—Vide *Medical Gazette* for January 19, p. 523. And we think it but justly due to Dr. Lee to say that he has, in this instance, made one of the most brilliant additions to modern discovery connected with the organization of the uterus.



*Anatomical Manipulation; or the Methods of pursuing practical Investigations in Comparative Anatomy and Physiology. Also, an Introduction to the Use of the Microscope, &c.* By ALFRED TULK, M.R.C.S., M.E.S., and ARTHUR HENFREY, A.L.S., M.Mic.S. London, 1844.

IN the study of human, as well as of comparative anatomy, the accuracy of our observations, and the justness of the inferences deduced from them, must, in a great measure, depend upon the manner in which the various complex structures, which enter into the composition of animal bodies, are displayed and prepared for examination.

To the student, therefore, it is of the highest importance to acquire a practical knowledge of the contrivances to be adopted, the instruments to be used, and the general means to be employed in his researches.

Although several very excellent works on these subjects have been published in this country, yet, owing to the present advanced state of the sciences of Comparative and Structural Anatomy, and especially to the recent application of improved microscopes to the investigation of these subjects, the "Instructors" referred to are but little available as useful guides to the anatomist.

In order to supply this deficiency, the work before us has been produced,—a work which we feel assured will afford valuable assistance to every one entering upon the studies of comparative anatomy and physiology.

The authors inform us that they have taken as their model the treatise of M. Straus-Durckheim, entitled "*Traité Pratique et Theorique d'Anatomie Comparative*," following his plan more or less closely in the First and Third Parts, condensing and translating his matter, and making such additions and alterations as they considered needful; while the whole of the Second Part has been written anew.

The First Part treats, in a very comprehensive manner, of the mechanical arrangements required in the dissection of animals; leaving it to the student to select those portions which may be best adapted to his means, and the particular direction of his investigations. Under the head of Mechanical Arrangements are included dissecting rooms and tables, workshops, troughs, skeleton frames and boxes, tools, &c.; an excellent description is also given of the various instruments invented for injecting vascular tissues, the different kinds of injections used by anatomists, and the substances employed in preparing and

preserving animal structures. This section of the work contains much useful information, and is illustrated by a number of well executed wood-cuts.

The microscope forms the subject of the Second Part, which commences with a brief summary of the optical principles on which these instruments are constructed. The laws of refraction, and the effects of different forms of lenses upon rays of light passing through them, are well explained; and the action of simple magnifiers, their imperfections, and the means by which spherical aberration and chromatic dispersion are corrected, are described in a clear and intelligible manner. The different improvements in simple microscopes are next detailed, by the adoption of which the aperture can be increased, so as to give penetration without losing distinctness or definition.

The author then proceeds to the consideration of the compound microscope, and the relative advantages of various eye-pieces and object glasses. A second chapter is devoted to the mechanical construction of microscopes, the best methods of illumination, and the modes of using the camera-lucida, polarizing apparatus, micrometers, and other accessory instruments. For the dissection, preparation, and preservation of minute objects, and the general manipulation of simple and compound microscopes, many valuable directions are given to the student, and the descriptions are, in most instances, accompanied by accurate diagrams, which very much enhance the excellence of the work.

The Third Part, by Mr. Alfred Tulk, contains directions for dissecting and preparing the various systems of organs in the different classes of animals. In his introductory remarks the author gives the following good advice to students:

“ Next in importance to the dissection of an animal, it is indispensable for the student of comparative anatomy to acquire the art of *describing* with accuracy, perspicuity, and distinctness, the various objects which his scalpel has disclosed; a faculty, indeed, by no means attainable at first, and which can be gained only by practice and a strict observance of the meaning of the terms used in scientific language. It is almost needless to insist upon *drawing*, as most useful in aiding our actual researches, and the pen. Lastly, in preparing to investigate any point in comparative anatomy and physiology, if with a view towards publishing the results of his labours, the observer should never neglect to make himself acquainted with all that has already been done (if any) upon the subject, both by the old and recent authors of this country and the continent. In this way much useless pains, and subsequent disappointment as regards originality, will be frequently avoided.”

The best course to be pursued in dissecting animals, when circumstances admit of it, is to proceed from without inwards, and to study carefully each part in succession as it presents itself: in accordance with this plan, the author has arranged his ample and judicious directions, treating separately of each system in the vertebrata, articulata, mollusca, and radiata. We cannot follow him in detail through this important, because practical, portion of his subject, but we can assure our readers that the matter and manner of this section are fully equal to the preceding parts of the work. To every student of comparative anatomy and physiology we strongly recommend this treatise, as an instructive companion and useful guide to the study of these sciences.

- Traité de Toxicologie.* Par M. ORFILA. Quatrieme Edition; revue, corrigée, et augmentée. Paris, 1843. Two vols.  
*A Manual of Medical Jurisprudence.* By ALFRED S. TAYLOR, Lecturer on Medical Jurisprudence and Chemistry in Guy's Hospital. London: John Churchill. 1844. pp. 679.  
*Principles of Forensic Medicine.* By WILLIAM A. GUY, M.B. Cantab.; Professor of Forensic Medicine, King's College, London. London: Renshaw. 1843. Parts I. and II.

OF the many distinguished ornaments of the French School of Medicine, none have laboured more indefatigably—more successfully, than M. Orfila. For some years past valuable monographs on various of the most important subjects of public medicine, have emanated in rapid succession from his pen, most of which are distinguished by his accustomed accuracy and research. During the above period his celebrated treatise on Legal Medicine has passed through three editions, its author being at the same time charged with the important functions of Professor of Medical Chemistry, and Dean of the Faculty of Medicine.

His treatise on Toxicology, the first edition of which appeared about twenty years since, has justly gained for him (what in the language of his compatriots is termed) an European reputation. The important accessions which the science has acquired by the recent labours of this distinguished public physician, entitle him to the gratitude of all who duly estimate the importance of forensic medicine. And here, were the occasion a suitable one, we should feel tempted to inquire how it has happened, that although few are disposed formally to deny that



a knowledge of public medicine is indispensable to the well-informed practitioner, yet practically, in our medical circles, its facts and principles fall upon the ear of the majority as idle tales.

It would doubtless be not uninteresting to trace the origin of that misconception and apathy, which in these countries have assigned a position of mere tolerance to a department of knowledge of confessed public utility, one which has occupied some of the most trenchant intellects, and has largely engaged the attention of such men as Paré, Louis, Haller, Hunter, and Foderé.

In very truth, the conventional language even of many engaged in medical instruction, assigns to forensic medicine a position amongst the "minor courses," placing it lower than natural history in the scale of practical utility, and consequently, as at present circumstanced, it drags on a disputed scholastic existence. The root of all this is to be found in various circumstances, of which some of the most prominent are, ignorance of the basis on which a knowledge of the science reposes; the irremunerative nature of public medical services; and the intrinsic difficulty of the subject itself, as compared with other departments of medical science. We have no intention, however, of entering, *ex cathedrâ*, into the consideration of these topics, or of discussing the most feasible methods of effectuating a more rational state of opinion and feeling, in regard to the subject. We shall content ourselves with adducing in evidence of the condition of things just noticed, the fact (a singular one doubtless), that the College of Surgeons of England, we believe not five years since, formally repudiated forensic medicine, which had a short time previously found favour in its sight; it now declares it, by the mouth and act of its council, a superfluous branch of medical acquirement.

Such a procedure on the part of a body, which ostensibly represents the Profession in England, and which should be the guardian and motive instrument of medical education in that country, is calculated to awaken surprise, and merits the severest reprehension. The progress of medical science in Ireland and Scotland, as on the Continent, has led to the incorporation of legal medicine with the ordinary branches of study, as indispensable to the aspirant for public favour; the incredible announcement, on the contrary, of the London College, almost tempts us to inquire whether the position of the English practitioner is of such a nature as to confer upon him an exemption from contributing his quota to the public safety. If indifference to the study of forensic medicine exist amongst ourselves, it is

surely not surprising, that it should prevail in at least an equal degree amongst the various grades of the legal Profession, to whom, notwithstanding, an acquaintance with its leading topics is frequently indispensable. This is even more strikingly apparent amongst the higher functionaries, whose peculiar office it is, or should be, to secure the development of such scientific facts and principles as are required in evidence in our courts of judicature. These persons, however, for the most part, exhibit a lamentable want of acquaintance with judicial medicine, and fall frequently moreover into the error so prejudicial to the interests of justice, of considering that an extensive acquaintance with medicine in its *curative* relations, constitutes the medical witness a suitable guide to a jury in the decision of medico-legal questions. Thus, it suffices, in the eyes of such persons, that an individual should be an expert anatomist, to constitute him a proper referee in a question of strangulation; whilst the evidence of an eminent practitioner, albeit such an one may be wholly uninstructed in medico-forensic inquiries, outweighs that of individuals who have wisely considered it necessary to be instructed in *both* departments, and have taken the proper and only satisfactory mode of becoming so, namely, that of studying the *public*, as they would any other special department of their Profession. To so monstrous an extent has this practice hitherto prevailed amongst our judges, that in any case of unusual occurrence, an instructed witness is placed in danger of being considered ignorant, should his opinion have the misfortune to contravene that of some practitioner of repute.

It would be well if those engaged in the practice of such departments of law as bring them in contact with medical evidence, would take the trouble to compare and ascertain the disparity of the facts of curative and judiciary medicine; they would then become aware of the propriety of the question which Dr. Smith has proposed to be put *in limine* to every medical witness, "Whether he has studied Medical Jurisprudence?"\*

Nothing, in our judgment, tends more powerfully to lead to a correct estimate of the real scope and value of forensic medicine, and also to prove that despite of the dicta of colleges, a more wholesome tone of opinion has already commenced, than the treatises and monographs on medico-legal subjects, which have of late years emanated from the British Press.

To our continental neighbours in Germany and France must be conceded the credit of having initiated the collection of facts and principles in public medicine. To the stimulus thus given there has been a response in the works of Male, Smith, and Paris, which, in spite of all their imperfections, have done much to

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\* In the conventional sense of the term.



awaken the interest of medical men to this important department of their duties.

The great frequency of charges of poisoning, the critical and strictly medical character of the inquiries to which they give rise, and the momentous consequences which from the nature of the crime they necessarily involve, have led to a greater advance in the toxicological, than in the other branches of medico-legal science. It would not be difficult to show, that from the nature and connexions of the latter, such must necessarily be the case, but these considerations must give place to a brief exposition of the works named at the commencement of the foregoing remarks.

There does not appear to be any material alteration in the arrangement of the subjects comprised in the present edition of Professor Orfila's treatise. The main feature in which it differs from that which preceded it, is to be found in the copiousness and novelty of the details into which he enters in the consideration of individual poisons.

M. Orfila adheres to the classification adopted in the third impression of his work, namely, one based on the physiological action and vital manifestations of the various substances; the inconvenience and imperfection of which are evident from the fact, that under varying circumstances of quantity, state of aggregation of the poison, &c., on the one hand, and peculiar conditions of the stomach and system, and certain more obscure influences on the other, the action of our commonest poisons is subject to singular variations. Thus with the exception of certain local powerfully corrosive poisons, and a few narcotics, a large number of deleterious agents might be indifferently, and with equal propriety, ranged in the class either of irritants, or narcotico-acrids. In the present state, however, of our knowledge of the action of poisons, probably no better one can be proposed. The last of Orfila's divisions, the septic poisons, is of doubtful propriety.

Having disposed of some generalities relative to the methods to be employed in studying the agency of any special substance, and added some new observations on the imbibition of liquids in the living and dead body, our author enters on the consideration of the class of irritants, which occupies the greater part of the first and the commencement of the second volume.

Most important alterations have been made in the chapters on the mineral and oxalic acids, which may be said to have been re-written. In the section on sulphuric acid will be found some elaborate investigations relative to the detection of that substance considered in the free state, a satisfactory mode of effecting which has been till lately a desideratum in judiciary



injuries. The Professor seems, however, on this as well as other topics, to be unacquainted with, or at least passes over in silence, the researches of his German and English cotemporaries.

The chapter on Arsenical poisons is replete with most important details, embodying the author's more recent researches on the absorption, and especially the detection of arsenic in the blood, and in organs remote from the seat of its primary application; researches which have gained him great celebrity, and attracted universal attention.

In the present edition the observations on the physiological action of arsenic have been in some respects, and, we think, disadvantageously, curtailed; this is perhaps more than compensated for by the elaborate mode in which the subject of the detection of the poison is treated. In handling this important topic, M. Orfila has not omitted the indispensable precaution of discussing the various heresies and errors with which this subject has been encumbered by numerous assailants, whose pertinacity, as is often the case, appears to have been only commensurate with their ignorance of the matter under discussion. Amongst many others, the professor has dealt summary justice to the speculative objections of M. Raspail, whose fertile imagination, aided by his scientific acquirements, would have sufficed to nonplus a less practised opponent. The methods proposed by the author for the detection of the poison in a state of complex admixture (*haud imperiti loquimur*), are in some respects unsatisfactory. The carbonization by nitric acid is undoubtedly one, which if used as a preliminary to the employment of Marsh's method, is only likely to succeed in M. Orfila's hands. The method of carbonization by sulphuric acid is much simpler, and more effectual, and, under certain modifications, is not subject to the objection which applies with considerable force to the mode which our author seems to prefer to all others—that of deflagration with nitrate of potass. The latter mode is undoubtedly most effectual to the complete destruction of the organic matter; but open to the serious objection of dissipating in some cases even a considerable amount of the arsenic. The recent method of precipitating metallic arsenic as devised by Reinsch, is considered in an appendix, and reported on not very favourably, a result which we are disposed to attribute in part to the natural unwillingness of the professor to abandon methods which have led to such brilliant results in his own hands. We are, however, satisfied by repeated experience, that the method of Reinsch, under proper management, is adequate to the detection of arsenic in proportion fully as minute as that to which

Marsh's proceeding is responsive, provided that in the case of the blood, liver, &c., one or more preliminary carbonizations by sulphuric acid are employed.

The consideration of the irritant poisons is followed by a new chapter on the chemico-forensic relations of compound poisoning, a subject to the practical investigation of which several instances of late occurrence have directed the attention of medical jurists. The narcotics and narcotico-acrids are discussed with the same care and accuracy evinced in other parts of the work.

Without wishing in the least to detract from the intrinsic merits of Professor Orfila's performance, and while fully acknowledging its many excellencies, we cannot state that the volumes before us, practically important as they are, and exhibiting as they do so vast an amount of labour, can be considered as embodying the present state of medico-legal science in reference to poisoning. Many important discussions of frequent occurrence in courts of justice, are either but slightly touched upon, or wholly omitted; e. g. the quantity of the various substances required to destroy life, the smallest quantity which has been known to cause death in the previously healthy human subject; the largest quantity from the effects of which individuals have escaped with life; the period within which the various poisons usually prove fatal, &c. The chapter on poisoning in the abstract sense, without reference to any particular substance, and the medico-moral relations of poisoning, are dismissed with comparatively slight notice; and this is the more to be regretted, not only from the vast experience of the author, but also from the fact, that such considerations frequently present themselves forcibly to the attention of the forensic physician. The work of Professor Orfila is not free from the same fault, which pervades those of the majority of his countrymen, and in which respect no obvious sign of amendment is discernible, except in the productions of Rayer and a few others, namely, a neglect of, or want of acquaintance with, the labours of his brethren in other countries, especially in Germany and Great Britain, from which sources his work might have derived most important accessions. The above-mentioned deficiencies in the recent edition of Professor Orfila's Treatise, the forensic physician will find in a considerable degree compensated for, by a production which has recently appeared from the pen of Mr. Taylor, Lecturer on Forensic Medicine in Guy's Hospital, London, entitled, "A Manual of Medical Jurisprudence." Were we to judge from the title, taken in conjunction with past experience of the various mutilated compilations which have appeared in the guise of



Manuals, we should not be inclined to presage great things concerning it. The reader, however, will meet with an agreeable disappointment when he finds the modest "Manual" an elaborate and valuable treatise on forensic medicine, the work of one practically acquainted with his subject, possessing an ample experience, and evincing a discriminating judgment in the selection of all that is most important in the labours of his cotemporaries. We must confess, however, *in limine*, our regret that Mr. Taylor should have so far deferred to established custom as to retain the term "medical jurisprudence;" we say this, notwithstanding the sanction of high authority, which our author might plead in support of his retention of the title; but as we are impelled (possibly from mere obstinacy) to enter the ancients' protest, "nullius addictus jurare in verba magistri." We appeal to the fact that jurisprudence being the knowledge of law, medical jurisprudence (and in this sense the French writers properly accept it) is the science or knowledge of those legal matters which relate to medicine; as, for example, to the liabilities, privileges, and immunities of medical persons, the enactments relative to medical corporations and education, and finally, the legal provisions regarding those subjects which involve medical evidence in courts of justice, as injuries to the person, or incompetency of mind, &c., the character of which enactments no doubt materially influence the *nature* and *extent* of the inquiries of forensic medicine, but are yet essentially distinct. It is, therefore, evident, that while every instructed writer on forensic medicine must present to his readers an intercurrent exposition of medical jurisprudence, the great body of his work must be constituted by those *medical* facts and principles which are suited to the exigencies of the practitioner appearing in the forum. Were we even to concede the title "Medical Jurisprudence," still that department of knowledge, in its conventional acceptation, embraces within its precincts the extensive subject of medical police, or public health, on which the great majority of writers in these countries (professedly) on medical jurisprudence, are nearly or altogether silent. Practically, the chief objection to the designation lies in its tendency to misguide the student, by leading him to the belief that his studies in this department are to be largely of a legal character, an idea to which the very superfluous proceeding of delegating in part to the barrister the conduct of a course of forensic medicine, has afforded a colourable pretext.

Having indulged, however, our critical longings for the extinction of the *title*, we find the CONTENTS of the manual com-



elling us to a very different mode of feeling. Mr. Taylor is obliged, partly by the nature of the subject (notwithstanding the *systematic* treatises of the German school), to act the eclectic, and hence the various topics are arranged rather in the order of their importance, than in relation to their supposed mutual connexion, which, even when effectuated in treatises, however it may assist the memory, will be found sadly disjointed in the coroner's court or crown solicitor's office, where the subtle arrangements of pains-taking medico-legal authors are unceremoniously deprived at once of their beauty and their value.

Mr. Taylor occupies about one-third of his work with the practical consideration of the subject of poisoning, which topic he handles with much accuracy and ability.

Our author has wisely abstained from those curious disquisitions on the history of poisoning, in which so many medico-legal writers delight to indulge, and which, apart from their interest to the imagination, serve only to occupy the place of more important matter. This practice has been carried into many departments of the science; surely, however, it can be of little practical moment to the forensic physician whether the hemlock, at the hands of which Socrates met his fate, was the Conium or some other deleterious herb, or to possess an accurate acquaintance with the relative frequency of infanticide in the various countries from Kamschatcha to Peru.

Mr. Taylor, in opening the consideration of the subject of poisoning, has addressed himself to the practical questions connected with the definition of a poison. We may here remark, that in charges of poisoning, as in questions relative to insanity, counsel not unfrequently endeavour to involve the medical witness by requiring definitions, in which the latter are sometimes exercised to their no small discomfiture. The questions discussed by our author hold relation to the statutable provisions regarding this crime, as modified by 1 Vict. c. 85, s. 2. The following observations embody his judgment on the matter:

“ The fact that a poison has been commonly regarded as a substance which produces serious effects when taken in small quantity, has induced many who have adopted this arbitrary view to assert, that certain substances which have actually caused death are not poisons; and this doctrine has been apparently strengthened by the fact, that were not some such distinction adopted, it would be difficult to separate the class of poisons from substances which are reputed inert. In answer to this view, it is perhaps sufficient to show, that there is no good reason for assuming this as the distinguishing character of a poison; for it is impossible, even among substances universally admitted to be poisonous, to make any division according to the effects

produced by the quantity taken. In relation to the quantity required to operate fatally, the difference is not so great between cream of tartar and oxalic acid, as between oxalic acid and strychnia. If we consider nitre and cream of tartar to be poisons, there seems to be no good reason for excluding common salt (the chloride of sodium). Medical practitioners would scarcely be prepared to admit this last-mentioned substance into the class of poisons; but it is to be observed that in a very large dose, it is capable of acting as a powerful irritant, and of inflaming the mucous membrane of the alimentary canal to the same extent as much smaller doses of other well-known irritants. An instance of common salt having caused death occurred in the north of England in the year 1839. A young lady swallowed, it is supposed, about half a pound of this substance, for the purpose of destroying worms. It was considered to be a harmless substance, according to the common notion; but in the course of about two hours, some alarming symptoms made their appearance, and medical assistance was sent for. She was found to be in a state of general paralysis; and although the stomach-pump and other antidotal means were speedily employed, she died in the course of a few hours. After death there were found the post-mortem changes generally indicative of the effects of a violent irritant on the alimentary passages.

“This case is deserving of attention, not merely from its novelty, but from the evidence which it furnishes of the fallacy of the popular doctrine, that what is taken so freely in small quantities, without mischief, may be taken, with equal impunity, in large doses. In a toxicological point of view, we do not see how the effects of salt, in this case, are to be distinguished from the action of the sulphate or acetate of copper; nor how, if we agree to call the latter substances poisons, we can consistently refuse this appellation to the former. It may appear to be a violation of common language, to call the chloride of sodium a poison, but assuredly it would be a greater inconsistency, to refuse to consider it as such, merely because it requires to be exhibited in a larger dose than some other irritants.”—p. 2.

“In Medical Jurisprudence, therefore, we must look to the effects produced by particular substances on the system, and their adequacy to cause death under symptoms of poisoning, rather than to the mere quantities in which they may have been taken.

“These remarks on the looseness of the common definition of the term poison have been suggested by the fact, that medical men have been severely pressed in cross-examination on trials for certain criminal offences, to state what is strictly a poison, and what is not. We shall see hereafter that in charges of attempted poisoning, or of criminal abortion by the administration of drugs, it is not an indifferent matter for a witness to be able to say what substances are noxious and what are inert; or to show, how some bodies, commonly reputed inert, may, under certain conditions, act deleteriously on the system.

“There is another point of view in which this question may require to be considered, namely, What is to be understood by a *deadly*



poison? In most indictments for poisoning, it is customary to describe every poison as *deadly*, a form of expression decidedly bad, and calculated to give rise to legal objections. The substance administered might with equal propriety be described as poisonous, or of a destructive nature; but those who draw up indictments are but little informed on such matters, and they can never speak of a poison without describing it as deadly.”—pp. 3, 4.

“It appears to me that the term *deadly* can be used with respect to those poisons only which may prove speedily fatal in small doses, such as strychnia, morphia, prussic acid, and arsenic, and that it could not with any sort of propriety be applied to such substances as the sulphate of copper. The error essentially lies in the legal wording of the indictment, with which, of course, a medical witness is not concerned. If an objection of this kind is to be held valid, and a question of criminal poisoning to be dismissed on so trivial a point, it is reasonable to expect that greater care should be used in drawing up indictments; as also that medical terms should not be employed by non-medical persons without proper supervision. Otherwise, it is obvious that the ends of justice must be defeated. Differences of opinion among educated medical witnesses are not likely to exist where slight previous reflection has been bestowed upon the subject.”—pp. 4, 5.

“In legal medicine, it is difficult to give such a definition of a poison as shall be entirely free from objection. Perhaps the most comprehensive definition which can be suggested is this: ‘A poison is a substance, which, when taken internally, is capable of destroying life without acting mechanically on the system.’

“Under this definition, it might be objected that the whole class of medicines, and numerous substances of an inert nature, would be included. Thus it is well known, that there are many cases on record, in which cold water, swallowed in large quantity, and in an excited state of the system, has led to the destruction of life, either rapidly by shock, or slowly by inducing gastritis. Any cold liquid, such as iced water, beer, or ice itself, may have an equally fatal effect. The action of water or cold liquids, under these circumstances, cannot be said to be mechanical; it appears to be due to the shock suddenly induced on the nervous system through the lining membrane of the stomach, and yet it would be inconsistent to class these inert liquids among poisons.

“In all cases of this description, it appears to me, that we are justified in drawing the following distinction between poisonous and non-poisonous substances. If the deleterious effect does not depend upon the nature of the substance taken, but upon the state of the system at the time at which it is swallowed, the substance cannot be regarded as a poison. All poisonous substances are *per se* deleterious, the state of the system, setting aside for the present the peculiar effects of idiosyncrasy and habit, has very little influence on their operation. The symptoms may be suspended for a time or slightly modified in their progress, but sooner or later the poison will affect the



healthy and diseased, the old and the young, with a uniformity in its effects, not to be easily mistaken. A distinction of this kind cannot, however, be drawn except by a professional man, who has given attention to the subject of toxicology, and, therefore, it is no matter of surprise that poisoning should have been in more than one instance erroneously imputed, in cases where death has followed the drinking of cold liquids.

“ In thus giving the medical definition of a poison, it is necessary to observe, that the law never regards the manner in which the substance administered acts. If it be capable of injuring the health of an individual, it is of little consequence so far as the responsibility of a prisoner is concerned, whether its action on the body be of a mechanical or chemical nature. Thus a substance which simply acts mechanically on the stomach, may, if wilfully administered with intent to injure, involve a person in a criminal charge, as much as if he had administered arsenic, or any of the ordinary poisons. It is then necessary that we should consider what the law means by the act of poisoning. If the substance criminally administered destroy life, whatever may be its nature or mode of operation, the accused is tried on a charge of murder, or manslaughter, and the whole duty of the medical witness consists in showing that the substance taken was the certain cause of death.”—pp. 5, 6.

Again, in adverting to the term in the statute, “destructive thing,” he has interwoven with the text many most important cases and inquiries relative to mechanical irritants, as pounded glass, pins, &c.

In the chapter on the Physiological Action of Poisons, the student will find the most recent information. The conclusions of the author on this subject are as follows:

“ 1. That the remote influence of poisons is sometimes conveyed through the medium of the blood. 2. That it may be conveyed by contact with the sentient extremities of nerves, probably of the ganglionic system. 3. That some poisons may act in both ways at different times.”—p. 19.

Our author very properly rejects the fantastic and unsupported speculations of Liebig, as to the intimate nature of the remote action of poisons.

Those who are called on to conduct the medical investigation of a charge of poisoning, or to perform a *post-mortem* inspection in such cases, will do well to study carefully the instructions given in the fourth chapter, the majority of which, though highly important, are commonly neglected by practitioners; they tend strongly to correct the prevailing practice of merely opening the stomach or the head, as suspicion may happen to point in the direction of narcotic or irritant poisoning. By such mode of

proceeding the real cause of death very commonly escapes notice; thus we were lately consulted in a case in which the attention of the inspector was exclusively directed to the stomach, the contents of which were submitted to analysis, the cause of death being probably connected with the head.

Our space will not permit us to dwell on the chapter on General Poisoning, which we shall only heartily recommend to the consideration of the medical jurist. The illustrative cases have a special value, as they are derived from the various circuits and other sources not usually available, and hence convey to the practitioner a much more instructive view of the actual nature of the inquiries to which he must hereafter devote his attention.

Mr. Taylor has conferred a marked benefit on the forensic physician in the consideration of a variety of questions constantly arising on trials, as to the minimum dose of various poisons, and other inquiries, to which we have alluded in speaking of Professor Orfila's recent work, and to which medico-legal writers have hitherto devoted but little attention.

In the chapter on Arsenic, various novel and valuable observations of this kind will be found. The author, in treating of the antidotes to this poison, seems unfavourably disposed towards the hydrated sesquioxide of iron, and adduces, in support of his views, certain experiments of his own, which tend to confirm those of previous observers. To such, however, we must decidedly object; as the factitious mixtures employed in such trials can never represent the natural secretions of the stomach; and although we may concede, with Mr. Taylor, that pulverent arsenic and hydrated sesquioxide of iron mutually react in but a slight degree, yet it is evident that the principal mischief is effected by the absorbed arsenic, and as solution is an essential preliminary to absorption, the experiments made on the reputed antidote with solutions of arsenic are not wholly irrelevant. We would also state, that within the sphere of our own observation, instances have occurred strongly inclining us to a favourable opinion of the antidotal powers of the oxide, which, of course, should not be employed to the exclusion of the mechanical methods of expulsion, and which also, for reasons now well understood, should be administered in considerable quantity, and its use persisted in as long as there is reason to believe that the *primæ viæ* retain any of the poison.

The forensic chemistry of poisons is amply, indeed minutely, discussed, of which the disquisitions relative to arsenic afford an excellent example. Several of the lately proposed methods of verifying arsenical sublimates which have "*encumbered*" science "with their aid," have been justly left unnoticed; in



reality, without adding anything valuable, they tend only to exhaust the memory and disgust the student. In treating of the various substances employed as poisons, Mr. Taylor has thought proper to superadd instructions for their *quantitative* analysis. This latter is frequently required where questions arise concerning the amount of poison administered in suspected articles, with reference to its adequacy to the production of dangerous or fatal results, or even (as occurred in a recent case), to determine the intent of the accused. Quantitative analysis may be useful also, not only in imputed poisoning, but also in regard to a query constantly and ignorantly propounded by barristers, coroners, &c.,—whether the quantity found in the stomach was sufficient to have caused death?

Our author has dealt with the mercurial poisons in an able and instructive manner. He has not neglected a topic which has recently come before the public, and which is of much moment to practitioners—the distinction between mercurial salivation and *cancrum oris*, which are sometimes confounded, and which, apart from the history of the case, are not always easily distinguishable. In discussing the suitable antidotes to the soluble mercurial preparations, Mr. Taylor does not pronounce positively as to the constitution of the compound formed by the agency of a solution of albumen upon that of the bichloride, which, as our readers are aware, was formerly considered, on the authority of Orfila, as a compound of calomel and albumen. This theory, which has been recently abandoned by the Professor, has given place to one equally erroneous—that it is a direct combination of the corrosive sublimate and albumen. The latter view is based on the solubility of the precipitate in chloride of sodium and the extraction of a soluble salt of mercury from the compound so produced, by the agency of sulphuric ether. We find, however, that peroxide of mercury, acted on by chloride of sodium, gives rise to the double chloride of sodium and mercury, which (and not sublimate) is extracted by ether.

Were any additional facts necessary to establish the opinion so well substantiated by Rose,\* namely, that the compound under consideration consists of albumen, united with peroxide of mercury, the following observations which we have made on the matter seem conclusive :

1. The compound may be formed directly by the union of albumen and the hydrated peroxide of mercury.†
2. It may be procured by precipitating with albumen a solution of pure pernitrate of mercury as nearly neutral as possible.

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\* Poggendorf Annalen, B. 28, St. i., 135.

† The solution of albumen (holding suspended the oxide in small quantity), being freely and continuously agitated.



No explanation appears to have been hitherto offered of the different effects produced by sublimate on the mouth and mucous membrane of the stomach; the slate-grey tint sometimes observed in the latter case, indicating that the compound formed contains metallic mercury, probably mixed with albuminate of the peroxide, as occurs when a solution of albumen is added to proto-nitrate of mercury.

Practitioners, in employing albumen as an antidote to sublimate, should be aware, that it may be given in too great quantity, as the compound formed is soluble in an excess of albumen, and, we doubt not, is the deleterious combination which enters the blood, and produces the remote influence of the poison. So long as the vomited matters contain a white opaque material admixed, the antidote should not be withheld; when the *ejecta*, on the contrary, become transparent, the further employment of the remedy is generally useless, and may be injurious.

The observations of Orfila on this antidote deserve mention:

“ Il résulte de ces expériences et de beaucoup d'autres analogues, 1° que le précipité d'albumine et de sublimé corrosif peut être pris sans danger à forte dose; 2° qu'il est vénéneux lorsqu'il est dissous dans l'albumine, mais qu'il l'est beaucoup moins que le sublimé corrosif; 3° que lorsqu'on administre du sublimé corrosif mêlé avec une quantité de blanc d'œuf plus considérable que celle qu'il faudrait pour obtenir le précipité, les animaux périssent, si on a empêché le vomissement, ce qui dépend de la dissolution du précipité d'albumine et de sublimé dans l'excès d'albumine: toutefois, l'action de ce mélange est beaucoup moins énergique que celle du sublimé, puisque les animaux tardent beaucoup plus à périr, et qu'après la mort on trouve à peine ou on ne découvre point des traces d'inflammation dans le canal digestif (voy. expér. 20<sup>e</sup>, p. 541); 4° que les chiens qui ont avalé 60 ou 75 centigrammes de sublimé, et auxquels on a laissé la faculté de vomir, périssent rarement lorsqu'on leur fait prendre *abondamment* du blanc d'œuf délayé dans l'eau, ce qui dépend de la propriété qu'a l'albumine de se combiner avec le sublimé qu'elle trouve dans l'estomac, et de favoriser le vomissement: en effet, le poison est rejeté à mesure qu'il se combine, et l'on a par conséquent peu à redouter l'action de la portion du précipité qui pourrait être dissous par l'excès d'albumine; 5° que tous les animaux qui ne prennent pas une assez grande quantité de blanc d'œuf meurent au bout de trois ou quatre heures, lors même qu'ils n'ont avalé que 60 centigrammes de sublimé, ce qui est d'accord avec ce que j'ai établi ailleurs, savoir que le sublimé corrosif, mêlé avec une quantité moyenne d'albumine, donne un liquide dans lequel il y a encore du sublimé, et qui doit par conséquent agir comme poison; 6° enfin, que de toutes les substances proposées jusqu'à ce jour comme antidote du sublimé corrosif, l'albumine, employée en quantité convenable, est la plus utile, quoiqu'elle ne neu-

tralise pas complètement les propriétés vénéneuses de ce poison, parce qu'elle peut être prise impunément, qu'elle forme avec le poison un corps nullement délétère lorsqu'il n'est pas dissous, enfin parce qu'elle est à la portée de tout le monde, et que son application peut être faite immédiatement après l'ingestion du poison."—pp. 543, 544.

Recent observations have shown that the *yolk* of egg is an equally, if not more, efficacious counter-poison.

The multiplied medico-legal questions relative to wounds next occupy Mr. Taylor's attention, the importance of which subject with that of the preceding, is evident from the fact, that in one year in the United Kingdom, there were no less than 1213 trials, involving questions of murder and manslaughter by wounding or poison. We feel it incumbent on us to state the discussions relative to wounding are conducted with a completeness, skill, and judgment, reflecting the highest credit on the author, who evinces in every department a sound practical knowledge of the subject. This chapter will be found of signal utility to the practitioner in the performance of his forensic duties, connected as they are with the solution of the following problems and considerations, each of which our author accurately investigates.

"What is a wound? Is the wound dangerous to life, or did it produce 'grievous bodily harm?' Whether the wound was inflicted before or after death? By what means was the wound inflicted? If by a weapon, what kind of weapon? How or by whom was the wound inflicted? Circumstantial evidence? Was the wound the direct cause of death? Death may follow a wound but not be caused by it; was the wound the indirect cause of death? For how long a time has the wound been inflicted? How long did the deceased survive? Acts indicative of volition and locomotion in persons mortally wounded; on wounds as they affect different parts of the body; fractures and dislocations; gun-shot wounds; on burns and scalds; burns from corrosive liquids."—pp. xii. xiii.

The inquiries connected with secondary causes of death in wounding are fully entered upon. Such investigations are of moment, not only to the continental medical jurist, but also in these countries; because, although the law looks to the *intent*, rather than the *result*, yet a discretionary power is vested in the hands of our judges, in awarding the amount of punishment.

In the present work will be found a detailed account of the mode of identifying blood-stains, an inquiry of frequent occurrence, and which occupied attention in a very important trial for murder, by wounding, which has just terminated in this city.



The chapter on Infanticide has been constructed with very considerable care, and evinces correct and deliberate judgment. The author has cut away the foundation on which reposed much of the sentimentality observable in the writings of Wm. Hunter, and other English authors on this subject, and which had its origin in a Draconic enactment of the period of James the First, rendering live birth and wilful destruction of offspring synonymous—a statute which, although long since abrogated, one might conceive, from the repeated objections of counsel on the score of the hydrostatic test, to be still in force. Notwithstanding the pains bestowed on this chapter, it is evident, from what has occurred on the different circuits within the last few years, that owing to the severity of our legal enactments, acquittals will probably continue to be obtained in spite of clear evidence of criminality; legal precedents requiring proof of conditions altogether transcending the skill of the most accomplished forensic physician.

The discussions connected with death from the various forms of obstructed respiration, are treated of in a practical and able manner. In adverting to the question of strangulation, our author, we perceive, has not omitted to notice the important case of *The Queen v. Byrne*, which was tried a couple of years since in this city, on which he remarks :

“ The state of the countenance alone, will scarcely warrant the expression of an opinion; for there are many kinds of death in which the features may become livid and distorted from causes totally unconnected with the application of external violence to the throat. Let not a witness, then, lend himself as an instrument in the hands of a counsel for the condemnation of a person against whom nothing but a strong suspicion from circumstances may be raised, and where medical evidence is unable to throw any light upon the probability of death having resulted from strangulation. See the trial of Mrs. Byrne, for murder, Dublin Commission Court, Aug. 1842. This trial is full of interest to the medical jurist. Some post mortem changes appear to have been mistaken for marks of strangulation.”

To which we would add that, probably, there has not for a long period occurred an instance more strikingly illustrative of the lamentable effects of popular prejudice, and non-acquaintance with forensic medicine, more especially observable on the case of certain legal functionaries, who, having to develop and place in order before a jury the facts of an investigation *on which a life depended*, should feel it their duty to be instructed on such topics.

The chapters on Rape and Insanity contain much useful information; we should be glad to see them enlarged in the next edition of the work, which might also include a chapter on



the signs of death, not in reference to medico-political precautions, but as presenting matters incidentally useful in various questions of violent dissolution, infanticide, &c. Nor should we object to a section on pseudo-morbid appearances, and their diagnosis, a subject, we may observe, by no means as precisely understood, or as much attended to, as the modern exclusive zeal for morbid anatomy would lead us to believe, and one moreover, of grave moment in public practice. The sections on abortive and retarded births contain, in a condensed form, much novel and useful matter.

In undertaking the task of presenting to the medical man a *practical* guide in the performance of his public duties, Mr. Taylor has acquitted himself with no ordinary ability and success. He has evidently not sought the construction of a treatise embodying *all* the known facts of the science; thus wisely avoiding a mode of proceeding, the adoption of which has loaded most modern works in this department, with incongruous details, but has rather brought his extended experience to bear on the practically important and every-day discussions of the forum. The author manifests an accurate acquaintance with the present state of medico-legal science, and has availed himself of the most important recent accessions of the German and French schools. A circumstance, however, which we consider of much importance, and which exhibits at once the industry of the author and his devotion to the science, is to be found in the numerous illustrations of the various topics of juridical medicine, which appear for the first time in the present production. Thus the practitioner may learn what is unquestionably of the highest moment, not only the *facts* required of him, but also their varying *combinations*, from the latter of which new departments of inquiry constantly arise.

The publisher has co-operated with the author, and has performed his part efficiently. The volume, which is well got up, contains, for its size and price, a very unusual amount of matter.

The intrinsic merits of Mr. Taylor's labours must speedily place his work in a distinguished position, as a guide and indispensable companion to the practitioner, in the exercise of his public functions.

Of Dr. Guy's work, two parts only have appeared, and consequently we are not as yet in a position to estimate accurately the value of his labours: those already before us, without professing to add much original matter, are plainly constructed with care, and evidence an orderly and perspicacious mind. The article on Insanity is valuable and elaborate, more especially that part of it which regards the criminal responsibility of the

insane. The discussions, also, relative to infanticide, develop the latest information, and incorporate the author's recent researches relative to the statical evidence of live birth. The writer has observed a lucid order in the discussion of the various topics already published. In reference to works on public medicine in general, we would remark, that while we should be far from depreciating the importance of that quality, and its uses to the student, we are yet free to confess, that in *practice* the advantages of systematizing will speedily be found overrated, especially if (as we conceive has happened in the case of many modern writers) it implicate the substitution of the ideal for the real. In truth, their productions not uncommonly realize the conception embodied in one of our English classics,—that of a consultation relative to the occurrence of death *per plethoram*, after removal of a limb, a result which, it was argued, *must* necessarily take place; experience, however, controverting the preconceived notions of the physicians, the latter, not a whit disconcerted, stoutly averred that the consequence alluded to *ought* to have occurred.

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*Lectures on the Theory and Practice of Midwifery, delivered in the Theatre of St. George's Hospital.* By Robert LEE, M. D., F. R. S.

ANY publication from the pen of Dr. Lee is deserving of the careful attention of the Profession, inasmuch as his productions are marked by care, accuracy, and minute observations; and although we do not always agree with his conclusions, it is with diffidence and caution we dissent from him.

Some time ago we noticed in this Journal his work on Clinical Midwifery, and expressed a regret, that along with the cases he had not given more detailed conclusions. In the present volume, however, Dr. Lee has supplied that deficiency, and it shall be our endeavour to lay them before our readers.

In order to do this, however, we must pass over the anatomy and physiology of the organs of generation—not that the chapters do not deserve a careful analysis, but because our limits do not admit of both, at least at present—and we think it better rather to complete the subject of operative midwifery, than to touch upon many others.

We pass then, at once, to Lecture 28, upon the Forceps. Lecture 27 is occupied with the history of its invention, but contains nothing new. Dr. Lee opens the Lecture with an allusion to the great variety of modifications which the instrument has undergone, and after stating that he prefers “Cham-



berlen's forceps, with the lock and wooden handles of Smellie—in fact Denman's short forceps, covered with leather," he proceeds:

"But in truth I attach comparatively little importance to the shape and dimensions of the forceps you use; I think it nearly a matter of indifference whether it has a pivot lock, or Smellie's lock, and whether the handles consist of wood or metal, provided the case will justify the use of the forceps, where it is had recourse to, and you know the principles which ought invariably to guide you in its employment."

It is quite possible, however, to have a very bad pair of forceps, and although the hand that is to use them is of the highest importance, yet a little attention to the curves of the blades, and to the temper and finish of the instrument, is of great consequence also. The greatest curvature should be near the point of the blade, and so managed, that when applied, and in action, the widest part of the instrument shall be that part of it which embraces the widest part of the head of the child.

Dr. Lee properly observes that the forceps is not calculated for labour when the cervix uteri, or soft parts, are swollen and inflamed, or undilatable, nor where there is considerable mechanical obstruction to the transit of the child. But

"It is chiefly in cases of protracted and difficult labour, from feeble and irregular, or partial uterine action, from passions of the mind, original or accidental debility in the mother, and other constitutional causes, which impair the energy of the brain, and nervous system of the uterus, that the forceps are used with advantage, and where, if any disproportion exists between the foetus and pelvis, it is only in a slight degree. The forceps is not applied because there is a great deficiency of space in the pelvis, a great want of due proportion between the head and the pelvis, but because there is a want of power in the uterus to propel the child through it, the want of which power we endeavour to supply with the forceps. This is the only legitimate ground on which we can proceed in the application of the forceps, whether it be exhaustion, convulsion, hæmorrhage, or whatever the circumstances may be which renders immediate delivery necessary to preserve the life of the mother and child. It is not for our own convenience, to spare ourselves the anxiety and fatigue of a protracted attendance upon any case of labour, to acquire skill and dexterity in the use of the forceps, that the instrument is to be applied, nor because it is in our power to do so, but because of certain local and constitutional symptoms appearing in the parent, or because the child is in danger from long-continued pressure, that we have recourse to artificial delivery. The gradual cessation of labour pains, and the descent of the head being arrested, are unquestionably the best indications we can have for the propriety of the



interference of art. If the uterine contractions cease, and the head, swollen and compressed, becomes arrested and impacted in the pelvis, and there is exhaustion, fever, and disturbance of the brain, and we believe that the head of the child will not be expelled by the natural efforts, it is our duty to endeavour without delay to extract it with the forceps. To apply the instrument when it is known with absolute certainty that the child is dead, would betray, to use the mildest expression, the highest degree of insensibility and folly."—p. 301.

With a little modification we agree with this quotation; but if the head be "impacted in the pelvis," we should not certainly consider it exactly a case for the forceps, nor do we quite think it the "highest degree of insensibility and folly" to extract a putrid head with the forceps, when, as we know by experience, we thereby avoid a much more tedious operation with the crotchet.

Dr. Lee agrees with the practitioners of this city in objecting to the use of the long forceps, on account of the danger to the mother: and in his reprobation of applying this, or any other instrument clandestinely, we heartily agree with him.

The instructions for the mode of applying the forceps are clear, minute, and judicious, but as they do not differ from those given in the standard authors, we do not think it necessary to quote them.

The next operation we shall notice is Craniotomy:

"When the child is dead, where a great disproportion exists between the head and the pelvis from any cause, and the os uteri is imperfectly dilated, and the parts swollen and rigid, and an ear cannot be felt, and circumstances occur demanding immediate delivery, recourse must be had to the perforator and not to the forceps. It is in difficult labour from distortion of the pelvis that we are most frequently compelled to open and extract the head; and where this exists in a high degree, and the brim is so contracted that the head cannot enter it, the operation of craniotomy often requires the employment of strong extracting force for several hours, and fatal contusion and laceration of the uterus, bladder, and vagina can only be prevented by the greatest caution and dexterity, and a perfect knowledge of the structure of all the parts. It unfortunately happens that in some cases, before the operation is performed, the soft parts have already been injured by the long-continued pressure they have sustained; the same thing happens here which takes place in strangulated hernia when the operation has been delayed too long, and sloughing follows. In cases of slight disproportion between the head and pelvis, or when there is none, but delivery becomes necessary in consequence of convulsions, hæmorrhage, or exhaustion, the operation is attended with little difficulty and danger; much less than the application of the forceps."—p. 313.

This is rather too loose an assertion ; that there is little difficulty when there is no disproportion, may be quite true, but when the necessity for craniotomy arises from exhaustion, even though there be no difficulty, there is often very great danger. In many such cases which have come under our notice, the patient has died in consequence of the shock of the operation, superadded to a prolonged labour. In these cases of extreme distortion, " requiring the employment of strong extracting force for several hours," to the imminent risk of the patient, as Dr. Lee justly observes, we have derived most effectual aid from a pair of long slight forceps (not what are called craniotomy forceps, for which we have as great an aversion as Dr. Lee), by which the bones of the head can be broken off and taken away piecemeal, until only the base of the cranium remains. This instrument was recommended and used by the late Professor Hamilton, though Dr. Lee does not seem acquainted with it. The following observations upon these cases are of great practical value.

" Great care must be taken in perforating the head in cases of extreme distortion, that the os uteri be not wounded with the sharp edges of the instrument. To obviate this, if the outlet be not so much contracted as to prevent the hand from being introduced, the fore and middle fingers of the left hand, or all the fingers, should be passed up within the os uteri, to the most depending part of the head, and the opening made in the same manner as already described, while the orifice is protected by the fingers expanded. The undilated state of the uterus adds greatly to the difficulty.

" In extracting the head with the crotchet, it not unfrequently happens that the bones of the cranium are all torn to pieces, and removed before the base of the skull has entered the brim of the pelvis. It is impossible, under such circumstances, to fix the point of the crotchet in the foramen magnum, as some recommend ; and the best mode of proceeding is to pass the fingers of the left hand over the head as far as possible, and to slide up the crotchet between the fingers and the outside of the head, and fix its point in one of the orbits ; about the angles of the lower jaw, or wherever a secure hold can be obtained. In this manner, as recommended by Smellie, I have sometimes succeeded in extracting the head in a short time, where I had begun to despair of ever doing so by fixing the crotchet in the inner surface of the base of the cranium, or by any other means."—p. 317.

The section on " induction of premature labour " is much too short to be of use to junior practitioners. Dr. Lee agrees in its morality, safety, and utility, not only in cases of distorted pelvis, but in some of the dangerous diseases of pregnancy, and remarks :

" In cases of slighter distortion recourse should not be had to this operation, until it has been proved by one or more labours that a child



at the full period could not pass without lessening the head. Labour should not be brought on until the seven and a half month of gestation, or a little later, where it is known that the pelvis is very little contracted. In cases of very great distortion of the pelvis, the induction of premature labour at an early period, even of the first pregnancy (as has already been stated before the sixth month) is likewise known to be a safe operation, and to render craniotomy and the Cæsarian section wholly unnecessary. The only effectual method of bringing on premature labour is to puncture the foetal membranes, and discharge the liquor amnii. I have repeatedly detached the membranes with a catheter, from the lower part of the uterus, but labour has not followed. I have strong objections to the exhibition of ergot for the purpose of inducing premature labour, without taking the uncertainty of its effects into account."

Whilst agreeing with Dr. Lee as to the most effectual means of exciting uterine action, our experience rather confirms that of Dr. F. Ramsbotham, as to the value of the ergot of rye. Dr. Lee then adds:

"I have successfully employed the probe-pointed catheter, with a stiletto, in many cases, to puncture the membranes, when I could not do so with instruments less curved, and having sharp points. When you are about to induce premature labour, pass up the forefinger of the right hand to the os uteri, and when you have ascertained its precise situation, slide up along this finger the fore and middle fingers of the left hand to the posterior lip, then withdraw the forefinger of the other hand and take the handle of the instrument with it, and pass up the point into the groove formed betwixt the fingers of the left hand, to the os uteri, and gently press it forward along the cervix into the cavity of the uterus, about an inch and a half or two inches, when the membrane will generally be felt offering a slight degree of resistance. The stiletto should then be pressed forward with the thumb, and a second puncture made through the membrane before withdrawing the instrument. The blunt point of the catheter enables us to pass it into the uterus with safety, when the os uteri is so high up that the finger cannot even reach the anterior lip."—p. 319.

We have thus laid shortly before our readers the opinions of Dr. Lee upon the principal obstetric operations, and we have done so especially in reference to the notice we gave of his little work on Clinical Medicine, and not because of the superiority of this part of his lectures. There are many other subjects of great interest upon which he has entered more fully, and with equal or greater ability, and at a future period we hope to lay them also before our friends. Meantime, it hardly needs our recommendation to insure an extensive sale for this volume. Dr. Lee's reputation stands among the highest, nor will it be



lessened by the present publication, and we take our leave of him for the present, with respect for his zeal, industry, and talent.

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*Natural History, Pathology, and Treatment of the Epidemic Fever at present prevailing in Edinburgh, and other Towns.* By JOHN ROSE CORMACK, M. D., &c., &c., &c.

It is well known that occasionally, during the prevalence of our ordinary typhus or typhoid fevers, there occur isolated cases of what have been termed sporadic yellow fever, such as occurred in Paris in the end of summer, 1822, and have been met, we should suppose, by most physicians engaged in extensive fever practice in this country once or more in the course of their lives.

But it rarely happens that such cases become the epidemic disease of the season. Such, however, was the case, to a certain extent, in Dublin, in 1826-7, and in the large towns in Scotland during the past year. Of the former, we have a description in a very able lecture in Dr. Graves's Clinical Medicine, in which he draws an analogy between the Dublin epidemic, and the yellow fever of warm climates, showing that the pathology of both is the same, that they differ but in degree. The Scotch epidemic has excited the interest of medical men in that country, and called forth a number of essays from Drs. Alison, Henderson, Smith, &c. &c., and the volume now before us, from Dr. Cormack, whose opportunities of observation seem to have been ample, and to have been diligently made use of for the purpose of this treatise. He himself informs us, during the whole time of his connexion with the new Fever Hospital, he has daily devoted a large portion of time to observing and recording the features of the prevailing Epidemic, both when interfered with by medicines, and when allowed to run its natural course.

We have already, in the last Number of this Journal, announced the publication of this interesting work, and in pursuance of the promise then made, we proceed to give a brief analysis of its contents. Dr. Cormack arranges his observations under the heads of—1. Ordinary, or moderately congestive form of the disease. 2. Highly congestive form. 3. Pathology of the disease. 4. Sequelæ of the disease. 5. Treatment of the disease. 6. Statistics of the cases.

The following is his description of the *ordinary* form of the disease:

“ In ordinary cases the countenance of the patient has a peculiar appearance, which we may designate *bronzed*, for want of a better

term. Though no words can accurately convey what is thus meant to be described, the appearance itself is very characteristic, and has never failed to arrest and interest the medical visitors to the hospital to whom it has been pointed out.

“ The symptoms of invasion are in all cases remarkably similar, both as to their nature and order of occurrence.

“ The patient is first seized with coldness, rigors, head-ach, pain in the back, and more or less prostration of strength; but the latter symptom, it must be remarked, is often not at all urgent, many walking a long distance from the country to the hospital, especially during the first days of the disease, and a still greater number of the destitute town patients lounge about in the streets after their seizure, and come in to us on their legs.

“ After a period varying from less than half an hour to several hours, the cold fit terminates, when the severity of the head-ach greatly increases, and a dry, burning heat comes over the whole body, accompanied by much thirst and general uneasiness.

“ The hot stage is succeeded by a sweat, usually very profuse, continuing for a number of hours, and seldom attended or followed by any relief to the head-ach, or other pains.

“ Sometimes, though rarely, there is no sweating for two or three days after the seizure. Occasionally also there is no well-marked hot stage between the cold and sweating fits; and, at least in a few cases, the sweat breaks out on the face and upper part of the body, while the patient is yet in his initiatory rigors.

“ It is proper to remark, that during the whole course of the disorder, the perspiration has a characteristic disagreeable smell, and is decidedly acid, as is proved by its reddening litmus paper, and that sometimes with intensity. During the three stages of the initiatory paroxysm the pulse is rapid, being sometimes as high as  $150^{\circ}$ , seldom below  $90^{\circ}$ , and commonly ranging between  $90^{\circ}$  and  $120^{\circ}$ . During the rigors I have in several cases found it wiry and tremulous; in the hot stage, it is often hard, and not very easily compressed; at the sweating period it becomes fuller and softer, and does not exhibit that deficiency in strength shown after and during the perspiration of a more advanced period of the fever.

“ For the first forty-eight hours the tongue commonly continues moist, exhibiting at the same time a white, or brownish-yellow fur, excepting at the point, where there is usually a clear space, extending over a space often (as in *typhus abdominalis*) shaped like a triangle, the extremity of the tongue forming the base. Afterwards the tongue becomes dry, and longitudinally streaked on the centre with brown, in which state it continues till the approach or arrival of the crisis at from the third to the ninth, but in the majority of cases on the fifth day.

“ During the first four days some of the patients have occasional short rigors; but most commonly they are in a state of dry, ardent fever, with occasional sweatings. These sweatings occur, or at all events commence, in most cases between 2 and 9 A. M.; but to this



rule there are many exceptions. In a considerable proportion even of the ordinary and mild cases, nausea and vomiting usher in and attend the sufferings of the first days. Pain at the scrobiculus cordis generally accompanies these symptoms; not unfrequently it is present without them. A symptom which uniformly occurs during the first four days, is severe muscular and articular pain. General uneasiness or pain in the abdomen (but particularly above the pubes, and over the liver and spleen when pressure is made on these regions) are very commonly, but by no means uniformly met with.

“ So long as the patients suffer much from the symptoms now described they sleep badly, and frequently not at all, unless opiates are administered. The severe pains in the joints and muscles are often sufficient to account for the bad nights complained of, but even with those who do not suffer much from this cause, sleeplessness is a distressing symptom up to the crisis.

A remission on the third day is very common. It occurred in all the cases which I have had an opportunity of attentively observing, from the invasion onwards.

“ On or about the fifth day, there is an evident manifestation of the violence of the disorder being expended, and this change for the better is often very sudden and complete. One day we hear the patient moaning and groaning in pain, and on the next he is at ease and cheerful, his only complaints being of hunger and weakness. This state is generally ushered in by a copious sweat, or by epistaxis or diarrhœa. The sweating was by far the most critical evacuation till the beginning of October, when diarrhœa and dysentery, formerly rare occurrences, became common, and at the present time (Oct. 30) they are as usual as sweating. After this change the pulse, tongue, and skin are quite natural, and the facial bronzing often becomes less striking. For several days, or till about the fourteenth or fifteenth day of the disease, there is a period of intermission during which a great deal of lost strength is regained, and a steady improvement goes on in all respects.

“ On or about the fourteenth or fifteenth day from the beginning of the disease the patient relapses; or, in other words, has a paroxysm of fever similar to that which began his first attack. The relapse takes place late or early, just according to the date of the first convalescence, as will be clearly seen from all the cases to be detailed. It sometimes happens that the onset and progress of the second attack is attended by severer and at other times by milder symptoms than those of the first. In the relapse the abortions most commonly take place. In it also the muscular and articular pains are very often most severe. Cases which in the first attack were strictly mild and ordinary, have in the second become signalized by jaundice, delirium, diarrhœa, dysentery, and other grave symptoms. Such occurrences are, however, not common.

“ A large number of patients have a second and generally mild relapse on or about the twenty-first day. As these relapses take place often after dismissal from the hospital, it was some time before I discovered the frequency of third attacks.



“ In those who are young and of good constitution the convalescence is rapid and complete. In the old and debilitated it is otherwise ; but I have never seen any one, old or young, die of the ordinary form of the fever.

“ The above is a succinct account of the course of the disease in its most common form.

“ Some cases are subjoined which, I beg the reader to remark, are given not so much as illustrations of the treatment, as of the natural history of the fever.”

Passing over these, which, we may remark, appear to be reported with much care and accuracy, we come to the author's description of the *highly congestive form of the disease* :

“ Although many of the cases issuing in death, or characterized by extreme severity, present symptoms very different from those hitherto detailed, there can be no doubt that the disease is essentially the same, the difference being only one of degree, as will be more especially unfolded hereafter. Both forms are undoubtedly the result of the same morbid poison.

“ One of the most common symptoms in the highly congestive form of the disease is yellowness of the conjunctiva and of the whole surface of the body. It generally appears between the third and seventh day, and is always most intense on the face, neck, chest, abdomen, and thighs. The hue of the neck and chest is the most vivid ; then comes, of equal or nearly equal brightness, the abdomen ; then, somewhat fainter, the thighs ; then, considerably paler still, the legs, arms, and forearms ; the hands and feet get their colour later, always to a much less extent, and sometimes not at all. The yellowness occasionally appears during the relapse, and not in the first attack. I have seen it present in both. Associated with the yellowness there are generally depression, more or less delirium, dusky and often porter-coloured urine, black, melæna-like stools, and hæmorrhages from some of the mucous membranes. In the worst of the cases, black, coffee-ground-like matter is ejected from the stomach and passed per anum. In some cases the black vomit occurs without the yellowness ; and, on the other hand, at the autopsy of yellow patients who have had no black vomit, this matter has been found in the stomach and other parts of the alimentary canal.

“ Enlarged liver and spleen and tender and tympanitic abdomen are less constant, but still very usual symptoms in cases characterized by yellowness or extreme congestion. Difficult micturition has been complained of by several of my yellow and purple patients. A deep persistent colour of the face appearing before or immediately after the invasion of the disease is a certain prognostic of danger, and is seldom absent in those destined to be yellow. Since I first made this observation it has received, among others, two notable verifications in the cases of my assistant, Doctor Hende, and Mary Wallace, one of the nurses. Doctor Hende, I pointed out to my other assistant, Mr.

Reid, as deeply purple, at noon, when we were engaged with the visit : at 3 P. M. he was in the initial paroxysm of the fever. Mr. Reid and I remarked Mary Wallace becoming first bronzed, and at last purple, before she was laid up, and in consequence advised her to take the chlorinated solution, which she did not do. Both became yellow, and both narrowly escaped with their lives.

“ With the exception of the purple countenance, the symptoms which usher in the congestive form of the disease differ little from those attending the disorder in its milder degree. As has already been remarked, there is some considerable difference in the cases as to the time at which the yellowness appears.

“ Generally in the severe cases there is merely a remission about the seventh day, but no intermission ; and even in those who died a few days later, a slight amendment was noticed about the usually critical period.

“ In my dissections of the purple and yellow cases I have uniformly found bile in the gall bladder, a pervious state of all the bile ducts, and bile in the duodenum. Excessive capillary congestion was always met with ; and in the severe cases exuded blood was found between the muscular and mucous coats of the intestines.”

This last passage naturally leads us to the question, what is the origin of the yellow tinge of the skin in these cases, and in yellow fever ? and passing by for a time the author's remarks on the pathology of the disease, we shall notice his views of this part of the subject as well as those of other writers :

Several explanations have been offered ; as that of Thomassini, that hepatitis, sometimes recognizable by dissection, sometimes not so, is in all cases present. That of Broussais, that violent irritation of the duodenum is propagated to the secreting organ. Doctor Graves's opinion that spasm of the ducts is the cause : and, lastly, the opinion favoured by our author, that the cause is in the blood, and probably is connected with the non-elimination of bile from that fluid.

The first and second explanations may be answered in the language of Dr. Graves.

First, as to an *internal* hepatitis, that

“ As no such inflammation to our knowledge has been detected in those cases of yellow fever which present an apparently healthy state of the liver, and as the most accurate descriptions of the morbid anatomy of yellow fever with which we are acquainted report a healthy state of the liver in a majority of cases, we must, for the present at least, consider the jaundice of yellow fever as independent of hepatitis.”

Then as to duodenitis, the same writer observes :

“ If the irritation or inflammation of the duodenum was propagated to the liver, we must expect to find that organ inflamed.”



Dr. Graves thus states his own opinion (18th lecture):

“ It is well known to pathologists, since the time of Broussais, that jaundice is as frequently produced by duodenitis as hepatitis, if not more so: but I do not think that the explanation he gives is applicable to our cases. He concludes that when the mucous surface of the duodenum is thrown into a state of excitement, we may have a consequent affection of the liver, for the duodenum bears the same relation to the liver as the mouth does to the parotid gland; and we know that an irritation of the orifice of the ducts leading from this and the other salivary glands is immediately followed by an increased flow of their secretions. But our dissections have shown that the small intestines were affected not only by inflammation, but were acted upon by violent spasms, producing invaginations of different portions of the canal; and there can be no doubt that the ducts (possessing such considerable vital contractility), participated in these spasms, and thus prevented the flow of bile into the duodenum as effectually as if they were tied by a ligature, or their canals obstructed by calculi; and this explanation obtained great support from the fact, that the jaundice came on *suddenly* in most of the cases, *and was always preceded or accompanied by violent and convulsive contractions of the abdominal muscles and intestines.*”

Dr. Cormack thus expresses his opinion that the yellow tinge is one of the effects of the introduction of a morbid poison into the blood.

“ The yellowness of the skin in yellow fever has been ascribed to general ecchymoses, and possibly in some instances it may originate in this cause; for Andral has shown that it is this which produces the saffron colour of the skin, in what is improperly called the jaundice of new-born children. I have noticed that in my cases the yellowness was always most intense when the blood had been drawn to the surface by blisters, sinapisms, or other means. However, if this explanation be adopted in regard to yellow fever, it can only apply to those cases in which the yellowness is partial, or limited to particular parts of the body. Moreno, Gilkreest, and others have seen the sheets stained yellow with the perspiration, and this we could hardly expect were it merely ecchymoses which discoloured the skin. Moreover (as in the present epidemic) the fluid in the cavities, and the urine, have often a yellow tinge, and John Hunter states that the latter stains linen rags yellow, like that of a person in the jaundice. Fordyce attributes the yellow skin to a redundant secretion of sebaceous matter. Saunders believed that it depended rather upon a particular state of the lymph in the cellular substance of the parts, than upon the absorption of bile into the circulating mass. The most rational explanation seems to be that it is the result either of an absorption of bile, or of its non-elimination from the blood. There may be instances in which the former is the cause; but when we remember the disordered state of the secretions, and the diseased condition of the blood,



it seems more natural to conclude that the bile has either not been secreted, or secreted in very small quantity.

“The bite of a particular kind of viper possesses the remarkable property of causing the skin to become deep yellow, and that sometimes within the space of an hour. To produce this effect, however, the poison must be in a concentrated form, and actually introduced into the circulation. The primary effect both of the poison of yellow fever and of the viper, seems to be upon the blood, and in both instances there is a partial or complete suppression of the secretions. As intimately connected with this subject, it may be mentioned that yellowness of the skin, yellow sweats, and yellow urine, have ensued from eating certain kinds of poisonous fungi and fishes; and it may also be stated that there is a remarkable resemblance in the effects produced by the poison of animal and vegetable putrid matter, and the poisonous principle of certain fishes and fungi. Thomas states that from the effect of the fish poison he has seen the whole body become yellow, and the urine and sweat assume the same hue, the latter giving a deep yellow tinge to linen. He observed these symptoms in several cases, and particularly in himself, from eating the *pirea marina*, a poisonous rock fish. The resemblance between the post mortem examination in cases of poisoning from fungi, to those detailed as characteristic of yellow fever may be seen by consulting Christison on poisons.”

Our predilections for a humoral pathology would induce us to lean to this explanation, rather than to any of the foregoing; it is supported by a very striking case of sudden supervention of jaundice in typhus in which on dissection the liver and ducts were found healthy, and the heart and vena cava enormously distended with fluid frothy blood (page 90), as well as by observations instituted by Dr. Cormack and others, which prove the blood to be in an altered and dissolved condition during, and even prior to the disease under consideration.

“There seems good reason to believe that a number of individuals who do not actually succumb under the influence of the epidemic, are nevertheless affected by it in a marked and characteristic manner, such as by slight chills and sweatings, some headach and vomiting, with prostration of strength. All of these symptoms in a mild form may occur combined, or some of them only may be present. In one instance in which the whole of the group of symptoms occurred, along with the bronzing of the countenance, they entirely disappeared within twenty-four hours, an emetic having been given three hours after their invasion. . . . Probably change of air, either alone, or conjoined with the use of certain remedies, such as Labaracque’s chlorinated solution of soda, might in a considerable number of cases have proved sufficient to ward off, or perhaps, more correctly speaking, to arrest the disease *in limine*. This belief is principally grounded upon the

fact that for some days before there exists any other evidence of the presence of the disease, the countenance assumes a peculiar premonitory hue, indicating, I apprehend, a dissolved state of the blood, and a want of tone in the capillary vessels. When the vital fluid is still more dissolved in the subsequent stages of the disorder, we also find an increased inability to circulate in the capillaries, from the enlarged calibre, or relaxed state of these vessels, disabling the organs of secretion from performing their functions, from congestion, as is frequently manifested by the scanty urine and yellow skin, which latter symptom, as the cases detailed sufficiently prove, does not arise from any obstruction in the biliary ducts, but depends upon the bile not being separated from, or being reabsorbed by the blood. Another class of symptoms produced by this capillary congestion, is hæmorrhage from the mucous membranes, with occasional black vomit. That the blood really is in a dissolved state was made manifest to us, *first*, by the imperfect coagulation which it underwent when drawn from the veins of the patients, a homogeneous and spongy mass being formed in place of a firm fibrinous clot, with a supernatant serosity; *second*, by the ecchymoses which was uniformly observed to surround flea-bites, or other slight injuries of the skin; *third*, the frequent occurrence of purpurous spots; *fourth*, the hæmorrhage; and *fifth*, the discoveries made by the microscope.

“ Professor Allan Thompson had the goodness to lend me his able assistance in examining the blood of a number of my patients, by means of the microscope. A few drops were taken from the thumbs on the same day (Oct. 24th), of about a dozen persons, some of them in the pyrexial, and others in the apyrexial stage of the disorder; and it was found that in all of them there were an unusual number of pus globules, and in some cases, in addition to this, all the globules were found serrated and notched. One gentleman present on this occasion was observed to have his blood exactly in the same state as the fever patients, and within two days he was seized and went through two mild attacks, or to use conversational phraseology, *the fever and the relapse*. The blood of some other healthy persons was also examined at the same time; it exhibited nothing unnatural and none of these latter individuals have taken the fever, although more than a month has now elapsed since the observation was made.”

These observations are highly interesting, and accord with those of several writers on the yellow fever in America. Our readers are no doubt familiar with the reference to these contained in Dr. Tweedie's article on fever, in the *Cyclopædia of Practical Medicine*. Dr. Potter, whom he there quotes, states that it was remarkable

“ In all cases in which it was deemed expedient to bleed, the blood wore the same general appearances. After a separation the serum assumed a yellow shade, often a deep orange, and a portion of the red globules was invariably precipitated.”

He also found the same condition prior to the attack in the blood of those who resided in the malarious district, while in the blood of those who lived in a healthy district no such appearances were to be met; and he further states, that of the six apparently healthy persons whose blood gave such indications, four were seized with fever during the epidemic, the other two escaped any formal attack, but complained occasionally of head-ach, nausea, and other indications of disease.

Would not this orange hue of the serum explain the appearance of the skin and secreted fluids, without the necessity of supposing actual jaundice (though this is no doubt mostly present) in these cases? and does it not countenance the seemingly fanciful hypothesis of Saunders, that the colour of the skin depends rather upon a particular state of the lymph in the cellular substance of the parts, than upon the absorption of bile into the circulating mass?

To return to Dr. Cormack.

“The present epidemic,” he considers, “possesses positive and negative characters strikingly distinguishing it from the fever which generally prevails in Edinburgh, viz.:

“1. *The sudden and violent invasion of the disease.*

“2. *The bronzing, hardening, and purpling of the countenance before seizure.* This was one of the most remarkable peculiarities of the prevailing epidemic.”

By one it seems it was compared to the Walcheren epidemic. By another to the aspect of the inhabitants of the marshy districts of Italy, and it appeared to our author to bear a resemblance to the descriptions of Andouard and Blanc, of the change of colour of the countenance before it assumed the yellow cast in patients affected with yellow fever in warm climates.

“3. *The almost uniform occurrence of one or more relapses.*”

So great is the tendency to this, that the author says most confidently, unless anti-periodic remedies are employed, one or more relapses will occur with hardly a single exception. He does not offer any explanation of this peculiarity. It may be remarked, that in some parts of this country the prevailing fever of the past year has shown a similar tendency in a greater degree than we ever remember, but of course in nothing like the same proportion as the above. It is a remark of Dr. Cheyne, that in Ireland *short fevers* especially are prone to relapse.

“4. *An unusual number of cases exhibiting yellow skin, black vomit, and hæmorrhage.*



“ 5. *The short duration of the pyrexial state, and its mode of termination.*”

In these particulars, as well as the preceding, Dr. Cormack shows that the epidemic resembled the Irish one of 1826, while it bears an equal resemblance to yellow fever, a term, he contends, which should be banished from the nomenclature, inasmuch as yellow skin, and black vomit, black stools and urine, and hæmorrhage are consequences of congestion liable to occur in fevers of all types and countries.

“ 6. *Severe muscular and articular pains in the disease, and during convalescence.*”

These the author thinks may possibly depend on the presence of urea in the blood.

“ 7. *The rosy, elliptical eruption resembling measles is absent in almost every case in the present epidemic.*”

This, the author truly observes, is one of the most remarkable distinctions between the symptoms of this epidemic, and that which has been common in Edinburgh for a number of years past. He starts the inquiry, suggested by its *occasional presence*, whether the two fevers, though apparently so different, are not the results of modifications of the same morbid poison? As the question of the speciality of Typhus will come under our notice shortly, when examining another work now upon our table, we shall not dwell upon it at present. Dr. Cormack does not, we conceive, throw much light upon it, indeed he states that his own opinions are not settled, having been modified by recent experience, and he says:

“ If some think that on this point there has been exhibited an undue reluctance to enter fully upon an important pathological inquiry, I beg to remind them that data are yet wanting to entitle us to discuss it fairly and with profit. This may be attempted in a subsequent publication at the close of the epidemic.”

We hope so, and shall expect to receive much information upon a most interesting question, from so candid and pains-taking an inquirer as the author.

“ *Severe vomiting is much more common, as are likewise gastric, gastro-hepatic, gastro-splenic, and gastro-enteric symptoms.*

“ In the mild cases the matters vomited are generally the inješta, tinged with green of various degrees of intensity.

“ In the most malignant of the yellow cases there is sometimes a fine inky sediment in the vomit, at other times the grounds are gru-

mous, in consistence like the thick part of hare soup, and varying in colour from dark brown to black.

“The grumous matter of the black vomit, in its various forms, is unquestionably blood extravasated from the capillaries of the stomach, and chemically altered by the action of the acids of the stomach upon it.”

The acute pain which patients often complain of when pressure is made over the stomach and duodenum seems, Dr. Cormack thinks, to depend, in the majority of cases, upon flatulence alone. At all events, when accompanied by gaseous distention, which it generally is, he has found far more advantage from turpentine enemata, carminatives, and fomentations, than from leeches. A valuable remark.

Fulness of the liver has been noticed during life in some cases, but not so frequently as the same affection of the spleen, which becomes so much congested and enlarged, and gives so much pain on pressure, as to simulate *splenitis*. The enormous congestion, however, of this organ has, according to Dr. Cormack, as little to do with inflammation as any of the other congestions met with in the fever.

On the origin of the epidemic Dr. Cormack does not throw any light; he states, that “facts are not wanting to give colour to the belief that the disease has been imported into this country.” What these are he does not state. He considers the disease is contagious:

“Of this we have sufficient evidence in the fact, that almost all the clerks and others exposed to the contagion have been seized. Dr. Hende and his successor, Mr. Reid, in the new Fever Hospital; Dr. Bennet, my successor there; Mr. Cameron, and his successor Mr. Balfour, in the adjoining Fever house, as well as most of the resident and clinical clerks in the Royal Infirmary, have gone through severe attacks during the past summer and autumn. Hardly any of the nurses, laundry women, and others coming in contact with the patients, or their clothes, have escaped,” &c.

It does not seem to spread by contagion out of doors, at least not in the *new town*, where isolated cases of great severity have occurred, but have not propagated the disease. Probably, as Dr. Cormack seems to think, its power in this respect is not strong, requiring the aid of the *consortus ægrotorum* for its diffusion. In other words it might perhaps be termed by obstinate opponents of the doctrine of infection, a *factitious* contagion created by accumulation of sick persons, and not originally belonging to the disease.

The structural lesions caused by the fever are shown by a

summary of all the dissections made by Dr. Cormack. The following seem to have been the usual appearances :

Bile ducts pervious ; inspissated bile in the gall bladder ; black matter similar to that vomited contained in the stomach ; mucous membrane of stomach and intestines dark coloured from congestion, and with occasional patches of submucous exudation or extravasation of blood. Liver sometimes yellow, and resembling the condition described by Louis,—sometimes dark and tinged with blood. Spleen generally soft, sometimes enormously distended, weighing, in one instance, two pounds. Frequently, general internal congestion and yellowness of tissues.

“ Enough has been seen,” says the author, “ to indicate at least the nature of the lesions to be expected in similar cases, viz. 1. abundance, or even an excess of bile, and a pervious state of the biliary ducts ; and 2, more or less congestion of organs, with, frequently, extravasation of blood in various situations. These appearances are either identical with, or analogous to, what the majority of observers have noticed and described as being those which are found in persons dying of yellow fever. It may be interesting to refer to a few of them.”

Want of space forbids our extracting these.

The chapter on the sequelæ of the disease consists chiefly of extracts from Dr. M'Kenzie's Paper in the Medical Gazette for 24th November, on the peculiar form of Ophthalmitis affecting Convalescents ; and remarkable from its resemblance to that which occurred in persons recovering from the Dublin Epidemic of 1826, described by Doctor Jacob in the fifth volume of the Transactions of the Association of Physicians.

The remarks on treatment are highly judicious and important, and merit the study of all who may be called upon to treat this disease. He thus states the principles upon which his practice was founded :

“ At an early period of my experience I became convinced that there were three states most apt, either separately or conjointly, to cause death, and which, therefore, ought to be anxiously looked for, and, if possible, promptly corrected. They are :

“ 1st. *Congestion of the mucous membrane of the stomach and intestines, terminating in effusion of blood and subsequent destruction of large portions of this tissue.*

“ 2nd. *Congestion of one or more of the abdominal viscera, particularly of the liver and kidneys, disabling them from the performance of their seeretive function, thereby causing bodies to circulate with the blood which ought to be separated from it, and which bodies we know to act as poisons when not so eliminated from, or when directly introduced into the circulation.*



“ 3rd. *Debility and sinking.*

“ 4th. *It will also be necessary to speak of the measures to be adopted to prevent or modify relapses.*

“ The best means by which to prevent these evils are the cautious but steady use of purgatives, the determination of blood to the surface and extremities, and in some cases its abstraction. When the kidneys are not performing their functions, a small bleeding from the lumbar region by cupping, or even a dry cupping in those in whom depletion would be hazardous, proves of signal benefit. Of course when there is debility and a risk of sinking, cordials and stimulants must be administered ; and if, along with this, which is no uncommon case, there be nausea or vomiting, they must be combined with sedatives.

“ It has seemed proper to make these general statements before speaking separately of the various therapeutic agents, which will now be done.

“ *Abstraction of Blood.*—This powerful method of interference, for good or for evil, most naturally claims our attention, as to it have been ascribed numerous and great advantages. Several medical friends who have visited the hospital have urged me to practise it both generally and topically, from the success which they imagined had attended it in many cases. I have been told, for instance, and that very confidently, that patients bled in an early stage of the fever seldom relapsed or became yellow, and rarely suffered, except to a very small extent, from muscular and articular pains. Though I certainly did not expect to reap these advantages from the abstraction of blood, yet observing that the fever was attended in its commencement by much arterial excitement and congestion, it appeared to me both reasonable and justifiable to make some experiments upon the effects of venesection in suitable cases. In most, if not in all the instances, the headach was either relieved or entirely removed for a short time, and the hard and frequent pulse was rendered softer and slower. These beneficial changes were often not effects though sequences of the bleeding, as was satisfactorily proved by the very same changes frequently occurring as suddenly and unequivocally in patients in the same wards, and affected in the same way, *who were subjected to no treatment whatever.*”

He thus states his preference of general to local bleeding :

“ It is supposed by some that leeching is less objectionable than general bleeding, but I think the contrary of this supposition is often the truth. In opening a vein and allowing the blood to flow when the patient is sitting up, we have in the effect produced at the time, an accurate index by which to regulate the quantity to be taken ; and then it is almost always easy to arrest at pleasure the flow of blood from the brachial vein. With leeches it is different, and especially in the present epidemic, where the tendency to hæmorrhage, and the difficulty of arresting it, are so great, that I have several times seen alarming depression caused by the oozing from one or two leech bites,

between the time when they had been removed in the afternoon of one day and the noon visit of the next. The special objection to leeching is the danger of causing the loss of an uncertain quantity of blood.

“In several cases of pulmonary inflammation of various forms and degrees, I have seen all the symptoms disappear under the use of antimony and morphia combined, or the liberal use of the morphia and ipecacuan lozenges. These remedies, when used along with fomentations, sinapisms or blisters, are safe, and generally efficient substitutes for local bleeding, in thoracic complications. As the result of my experience then in this matter, I would say that the cerebral, pulmonary, and abdominal complications in which it is proper to abstract blood are extremely rare, and that in very many such instances it is a most hazardous practice. The statements which have been already made sufficiently justify this opinion, so far as the cerebral and pulmonary symptoms are concerned, and, with regard to the abdominal affection, this will be equally easy.

“In some of the most severe and threatening cases of abdominal pain and extreme tenderness on pressure, the patients have been well brought through simply by the diligent use of copious warm poultices and fomentations: enlarged and tender spleens have often done well with this simple treatment. I do not mean to say that it would be proper in all such cases to abstain from abstracting blood; but am anxious to point out how exceedingly valuable these remedies are, and how much safer it is in weak persons to rely on them, than to take away any blood. Francis Rose (*vide* page 60), when far spent in strength, was seized with acute symptoms of enteritis and diarrhoea. A little morphia was added to the whiskey which he was taking, to sustain his feeble and fluttering pulse, and his abdomen was most assiduously fomented. Contrary to all expectation, the symptoms abated, and recovery ensued. Depletion in any form would, I think, have killed him.”

The internal use of diaphoretics he disapproves of, but he recommends the use of external heat and moisture.

“Although of opinion that all diaphoretic and sudorific drugs are of little advantage, and that violent sudorific doses are injurious, I am yet of opinion that I have very often seen the best possible results from other means employed for the purpose of diaphoresis and sweating, such as the wet blanket, the partial warm bath, and tepid sponging. The general warm bath is apt to produce exhaustion. I had three young patients affected with ardent fever, and dry, hacking cough, closely wrapped up in a blanket wrung out of hot water; above this were placed several dry blankets. They sweated most copiously from ten to fourteen hours, and were then removed to a dry bed, where they all sweated again so freely, as to require to have their linens changed. They emerged from this sudorific regimen perfectly free from fever, cough, and pains, but excessively weak and languid.”



He also speaks highly of cold sponging in severe head-ach, and of the aspersion of the arms and chest with cold water in cases of irritability and restlessness.

*Purgatives* form, in the author's estimate, a most important part of the treatment :

"The great aim in administering these medicines in this and other fevers, should be, to clear out the bowels fully, and, if possible, daily, at the same time carefully avoiding such substances and doses as might cause gastro-intestinal irritation, or debility from catharsis."

Compound powder of jalap, compound colocynth pill, with blue pill and calomel combined, in cases of irritable stomach, with a quarter or half a grain of opium, the black draught, aloes and assafoetida, and castor oil, were those mostly used. Croton oil he considers a very suitable purgative in this disease.

His experience is unfavourable to the use of mercury, which he has latterly never used.

"The cases have gone on at least as well as formerly, during the pyrexial stage, and convalescence has been more rapid from there being no retardation of it from sore mouth." "As the biliary secretion is excessive, and not diminished in the yellow patients, it seems absurd to give a medicine which unquestionably acts as a direct stimulus on the liver."

*To relieve the muscular and arthritic pains*, colchicum was given without any good effect. The hydriodate of potass appeared to be useful, especially during convalescence; an observation which, our experience leads us to say, might be extended to other fevers.

Different tonics were given with good effect, more especially quinine, and the saccharine carbonate of iron.

The work concludes with a statistical table of cases.

The length of our extracts sufficiently shews the sense we entertain of the importance of this work. It is a modest and brief, as well as a faithful and learned account of the epidemic. We cordially recommend it to our readers, and again express our opinion that it deserves to be placed beside Cheyne and Barker's Report, in the library of every medical practitioner.

*Minor Surgery; or, Hints on the Every-day Duties of the Surgeon.* By H. H. SMITH, M. D. Illustrated by Engravings. Philadelphia.

THIS is a very useful little work, and we know no book published in England which gives such minute and satisfactory descriptions of the uses and modes of application of bandages,



straps, splints, &c., each description being illustrated by a good, though rather coarse wood-cut. There are a series of these illustrations, which exhibit the use of the handkerchief in various diseases of the head, body, and extremities, in a variety of ingenious ways, many of which were not known to us before, and their adoption we think will be likely to be found useful.

“The handkerchief, or square linen, may,” he says, “replace all the bandages that we have before treated of, and in its dimensions, as well as in the tissue composing it, must be regulated by the size of the part to which it is to be applied, or the circumstances of the moment. It is, therefore, a matter of indifference whether it be of silk, cotton, or linen; and if too short to go round a part at the time of its application, may be easily lengthened by attaching to its extremities two pieces of tape or ribbon. From this original piece we may form various other shapes suited to circumstances, viz., the triangle, the long square, the cravat, and the cord, made by twisting the cravat on itself.

The following is his account of Baynton's plan, and will convey a specimen of the style of the work :

“As the treatment of ulcers by the use of adhesive strips is of considerable importance, a detailed account of Baynton's plan is here given.

“Several strips of adhesive plaster, the manner of preparing which has been already described, of about two inches in breadth, and sufficiently long to pass round the limb and leave an end of about four or five inches; several longitudinal compresses made of soft calico, and a calico roller about three inches in breadth, and varying from four to six yards in length, according to the size of the limb, are first prepared. Then one of these strips is to be applied to the sound side of the limb, opposite the inferior part of the ulcer, so that the lower edge may be placed about an inch below the lower edge of the sore, and the ends drawn over the lower part of the ulcer, with as much gradual extension as the patient can conveniently bear; the other strips are then applied in the same manner, each above and in contact with the other, until the whole surface of the sore and of the limb is covered from one inch below to two or three inches above the affected part.

“The whole of the leg, if it is the part affected, should then be covered equally with the longitudinal compresses, and the roller applied round the limb, from the toes to the knee, with as much firmness as the patient can support without complaint. One or two spiral turns of the roller should be first passed round the ankle-joint, then as many round the foot as will cover and support every part of it, except the toes, and the same continued up the limb as far as the knee; the roller should be carried from the ankle upwards in reverses, as many of them being made as the parts require, in order that each turn may

lie flatly on the limb. Should the parts be much inflamed, or the suppuration be very abundant, the applications are to be wetted frequently with cold spring water. The patient may take exercise if he pleases, as this will be found to alleviate the pain and tend to accelerate the cure. The bandage ought to be daily applied soon after rising in the morning, when the parts are most free from tumefaction; and the force with which the ends of the plasters are drawn over the limb gradually increased as the parts return to their natural state of ease and sensibility. When the cure is thus far accomplished, the roller should be applied with as much tightness as the patient will bear, more particularly if the limb be in that enlarged or compressible state denominated scorbutic, or if the edges of the wound be thickened.

“ We may remark, that this bandage is liable to produce excoriations of the limb, but these are never serious except when they occur over the tendo-Achillis. To prevent them or accelerate their disappearance, Mr. Baynton recommends the application of a small shred of soft leather under the adhesive plaster: or a bit of sheet lead may be used in place of the shred of leather, as it answers better.

“ During the years 1830 and 1831, several of the most eminent surgeons of Paris submitted Baynton's method of compression to a series of experiments, which, as the result will show, were highly favourable to it. Velpeau found the average time of cure ten, fifteen, or twenty days, for ulcers of three, four, or five inches in circumference. Ph. Boyer, who perhaps pushed the experiments further than any one else, found the average period of treatment calculated upon a large number of cases, to be twenty-six days; and this result is so much the more striking, as Duchâtelet was noticing at the same period the average length of time required by the older methods, which he found in six hundred and ninety cases to be fifty-two days and a half, giving a difference of more than half in favour of Baynton's plan. In the course of these experiments some modifications were introduced; as, for instance, that by Velpeau and Ph. Boyer, of the substitution of good diachylon plaster for the mixture of Baynton. So, with respect to the breadth of the plasters, the above surgeons found them more advantageous when only an inch or an inch and quarter broad. In the course of the experiments, Roux and Ph. Boyer found that the inflammatory state of the ulcer did not counter-indicate the employment of compression, which often arrested even its secondary effects. Marjolin, however, recommended the reducing of the inflammation before proceeding to compression. Velpeau and Roux extended the compressive treatment to contused wounds with disorganization of the skin, which were getting into an atonic state, and also, to every species of wounds with or without loss of substance, when the cicatrization was slow, or otherwise checked by a general vice of the constitution, attending, however, in the latter case to internal remedial agents calculated to benefit the system. Ph. Boyer endeavoured to cure syphilitic and scorbutic ulcers by compressive strips alone, but without success; while, by exerting this species of

compression, and employing, at the same time, the ordinary internal remedies, the cure was remarkably hastened.

“ Ph. Boyer's observations all tend to support the opinion of Baynton himself, that, when the leg is properly bandaged, walking, at least moderately, tends to facilitate the cure, and renders it more complete. With regard to the periods of renewing the bandage, Velpeau found it quite sufficient to change it every three, four, or five days, according to the degree of irritation. Boyer never dressed them oftener than once in forty-eight hours. Valbrune considered it necessary to renew the bandage oftener, if the cessation of swelling caused it to become relaxed, but agrees with Velpeau and Boyer in thinking that the less often the bandage is disturbed the better.”



## SCIENTIFIC INTELLIGENCE.

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*Case of extensive cancerous Ulceration of the Leg, in which the Limb was removed after the Glands in the Groin had become enlarged, without a Return of the Disease.—Secondary Hemorrhage on the tenth Day after Operation, by John Stuart Vesey, M. D., Surgeon to the Magherafelt Poor-House, &c. &c.*

[For the Dublin Journal of Medical Science.]

William Ray, aged 64, a large and powerfully built man, consulted me on the 21st of August, 1842, labouring under the following symptoms: the front and sides of the right leg were covered by an ulceration, with a border of dark purple and immoveable skin which reached, above, to within a hand's breadth of the tuberosity of the tibia, and, below, covers the anterior part of the ankle joint. The ulcer itself presented the following characters: it was nearly four inches long, and two and a-half broad; its edges were very hard and elevated; inverted at some parts, everted at others: the surface presented alternate elevations and depressions, with here and there isolated formations of large unhealthy granulations, from each of which a dot of thick white matter could be pressed. The discharge from the diseased surface was thin and brown, profuse in quantity and possessed of the peculiar odour that characterizes cancerous ulceration. He had had from the commencement of his ailment, a burning and stinging pain in the sore, extending to the foot; but within the last three weeks this symptom had increased to such a degree as to render him miserable, and deprive him totally of sleep. The disease was of four years' duration, and during that time he had consulted many practitioners, and tried numerous applications, without any success. Several surgeons, one of them of high eminence, had told him the disease was cancer. On the thigh of the same side, within two inches of Poupart's ligament, its long diameter parallel to the course of the vessels, there was a swelling larger than a hen egg, which a minute examination proved to be formed by the junction of three irregular glandular tumours. Its base could be grasped by the hand, but it admitted of slight motion in all directions. It was firm to the feel, but this firmness was by no means deserving of the name of "stony hardness." It gave him no pain, and the skin over it was not discoloured. It was of twelve months' standing, and began, he says, as a small, moveable, painless kernel. In the left breast (close to the nipple) there was a firm tumour as large as a marble, and, like that in the groin, unattended by pain or cutaneous discoloration. It made its first appearance three months before.

On the back of the metacarpal bone of the right thumb, there was

an unhealthy sore, about an inch in length, with elevated edges and a border of dark-coloured skin. It was of five weeks' duration; attended with a scanty discharge, and a constant burning pain, worse at night; but never increased by the sharp and sudden stings that characterize the ulcer on the leg. He had no cough, nor any irregularity of respiration; no tumour or uneasiness in the abdomen. Pulse natural.

The man himself was desirous to have the limb taken off, but there was some hesitation on my part before I decided on this step. I was so situated that I could not have the advantage of a surgical consultation; but on examining, again and again, the enlarged glands in the upper third of the thigh, I came to the conclusion, from their mobility and freedom from pain, that they had become enlarged from mere irritation, and had not yet assumed the cancerous action. I saw nothing to forbid an operation on the tumour in the breast, although the ulceration on the thumb was unhealthy, yet it had less the appearance of well marked cancer than of a common sore in a worn down habit. In fine, I thought all his symptoms would be apt to yield to treatment if once the constitution could be, as it were, removed from under the influence of an irritating and extensive disease. Accordingly, on the 2d of September, 1842, I removed the limb below the tuberosity of the tibia and head of the fibula. The superficial vessels bled considerably; the tourniquet could not be effectually applied, owing to the extent of enlarged glands in the upper third of the thigh, and my assistant failed in making adequate pressure on the artery between Poupart's ligament and the glandular mass. I experienced the usual difficulty and delay in securing the tibial vessels, owing to their great retraction; and, from this cause, as well as the others adverted to already, the arterial hemorrhage was unusually great. An alarming syncope was the consequence, to rouse him from which a liberal supply of wine internally, and cold water dashed forcibly in his face, were necessary. When placed in bed he acted like a madman, shouting loudly, and tossing about, with every other evidences of strong nervous excitement. A draught, containing tincture of opium was administered. In half an hour no further bleeding having occurred, the stump was dressed with adhesive plaister and a bandage.

Ordered wine and chicken broth.

On the third day the angles of the wound for about an inch in extent, had united, the centre was open. Up to this, and for the two following days, he laboured under high nervous excitement, with great pallor of the face, weak and rapid pulse, oppressed and hurried respiration, though nothing abnormal could be detected by the stethoscope.

From 6th to 12th September, the stump had made no progress in healing; on the contrary the centre of it looked very unfavourable, and was covered by an ash coloured coating: its starting causes him much annoyance. Continue wine and soup, and let him have pills of camphor and hyosciamus.

At 9 o'clock P. M. September 12th (tenth day after operation), secondary hæmorrhage took place, and before I could reach his house he lost at least twenty ounces of arterial blood. I found him sitting up in his bed, calmly and collectedly expecting the worst. Upon removing the clotted tow which his friends had largely used to the bleeding surface, I found that the hæmorrhage had ceased, accordingly I did not interfere with the adhesive plaister, but ordered the stump to be exposed to the air, and to be kept wet with spirits and water.

September 16th. No return of the bleeding. The surface of the wound had taken on a much more favourable aspect, and healthy granulations had made their appearance. He was still much annoyed by starting, and fancied the amputated limb was still remaining in its place. The skin over the sharp end of the tibia was slightly swollen and red. Dry lint was placed in the cavity, and subsequently lint steeped in Tinct. Myrrhæ.

October 21st. The last ligature was removed this day ; some force necessary to do so, as it was held firmly by the granulations ; wound not larger than a sixpence and healthy.

December 10th. Wound healed ; general health very good. The mass of enlarged glands in the upper part of the thigh had quite disappeared, the tumour in the breast had disappeared, and the ulcer on the hand had healed.

March 20th, 1844. It is now eighteen months since the operation. The man has grown fat, and says he has not for many years enjoyed such excellent health as he does at present. The stump is quite sound and serviceable.

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*Remarks on Sibbens, by D. Wills, Esq., Surgeon, Cumnock, Ayrshire.*—It is no part of my present purpose to enter into any historical account of sibbens. Those who may feel curiosity on that subject, I refer to an essay of great ability and research, in the April Number of the *Edinburgh Journal of Medical Science*, for 1826, by Dr. Hibbert, where he attempts to prove that the sibbens of Scotland and the West Indian yaws are identical, and under the joint term of framboesia ranks them as a disease of the remotest antiquity. He also attempts to establish, and seemingly with greater success, that the morbus Gallicus, or French pox of the fifteenth century, was not lues venerea, but framboesia ; and not only do all the descriptions of the disease, which at that period struck a general panic over Europe, support his opinion, but the various modes by which it was communicated are those assigned at the present day, not to lues, but to framboesia. As a remarkable confirmation of his opinion, the first alarm began from the years 1483 to 1493, yet none of the medical writers of that period (and they seem to have been many and minute in their descriptions), make the slightest allusion to bubo until 1533, a period of 50 years ! Suppose the complaint to have been lues, the lechery of the age must have been great to present such a formidable phalanx of disease, as to induce the parliament of Paris, in the year 1496, to



prohibit all those affected from conversing with the rest of the world, under pain of death; and James IV. of Scotland, in the following year, to banish them to the island of Inch, or to have them burnt on the "cheike with the marking irne, that they may be kennit in time to cum." Dr. Adams also, in his valuable work on morbid poisons, gives sибbens a seniority to syphilis in Europe, and thinks them entitled to rank as distinct diseases.

Mr. Hill of Dumfries again, in the year 1769, maintained that the sибbens of Dumfriesshire and Galloway were nothing but a mild form of the venereal, and about the same time Dr. Freer supported a like opinion in an inaugural dissertation, where he throws out a fanciful theory regarding the possibility of lues being, like itch, the product of certain specific animalculæ. Between these he supposes a flirtation to have arisen, and the result to have been a cross mongrel breed of sibbenitic animalculæ. Dr. Mason Good has rather supposed sибbens to be a cross production between lues and yaws. "Sibbens," says this author, "is a variety of lues rendered hybrid by passing through a constitution already contaminated with yaws."

When Dr. Gilchrist first called the attention of the Profession to sибbens, by an essay in the Edinburgh Collection of Medical Essays and Observations, the disease would seem to have retained more the character of the French pox of the fifteenth century, and of the West Indian yaws, than it does at the present day. This change is, no doubt, mainly to be attributed to the improved habits of the lower orders. But I must hasten to my more immediate object, namely, to point out the striking similarity, if not identity, that subsists between this disease, and that form of the venereal, called by some authors the *fungoid venereal ulcer*.

Mr. Henry James Johnson, in the April Number of the *Medico-Chirurgical Review*, for 1834, in giving an account of this fungoid venereal sore, under the name of venereal condyloma, has presented so minute and faithful a description of sибbens, as it at present exists in this part of Scotland, as almost to make me doubt if that gentleman had not his model from Ayrshire, with this difference, that what he calls a secondary symptom is our primary. This is easily accounted for. Mr. Johnson has been in the habit of seeing the disease in the form it assumes when *got by coition*; we again commonly meet with it as *caught by contact of the lips*, or through the medium of tobacco pipes, &c. Sибbens, however, are frequently communicated by coition; and then the disease has all the characters of venereal condyloma.

In order that those more conversant with venereal condyloma may have an opportunity of judging how far these two affections correspond, I will now attempt to give a description of sибbens, as they at present appear in Ayrshire, Galloway, and Dumfriesshire, drawn from personal observation alone.

Sибbens do not originate in the form of a pustule, as most writers on the subject would have it, but in that of a tubercle or condyloma. This error, however, is the more excusable, from the fact, that when

the condyloma begins to ulcerate, the delicate cuticle may often be seen vesicated, or raised, and partly lying loose, round the circumference of the tubercle.

I have not been able to divide sibbens into the simple and ulcerated forms. The tubercles do not rise simultaneously, but in succession, and may be seen, both in a simple and ulcerated state, in the same subject. No doubt, in good constitutions, and those of very cleanly habits, the tendency to ulcerate is less than in those who are the reverse; but I look on the distinction as chiefly one of stage. They ulcerate much earlier on some parts than others. On the tonsils and palate, where they usually make their first appearance, they ulcerate early, but can rarely be seen distinctly. In their other haunts, the tongue, cheeks, angles of the mouth, anus, groins, and genital organs; though often clustered, they seldom fully coalesce, and have less tendency to ulcerate.

A sibben condyloma may vary in size from that of a silver penny to that of a sixpence—is either circular or oblong, and raised above the surface, from the thickness of a sixpence to that of a penny piece, is often as high above the surrounding skin, while in its simple form, as it ever is after, showing the impropriety of the term fungating ulcer. It varies in appearance, as in site. In its simple or ulcerated state, when situate on the dorsum and back part of the tongue, it has the appearance of a common wart, and is but little altered in colour from the parts around; about the angles of the mouth and round the anus, that of a wart also, and whiter than the surrounding parts. The resemblance to a wart would be stronger, could we suppose that excrescence as having a little more vitality, and a reddish tint. In the groins and arm-pits (very rare) it is deep red and glossy, and it is here, after the delicate cuticle has peeled off, that they chiefly assume somewhat the look of a raspberry in miniature, from whence the disease takes its name. The condylomata, in what I am inclined to consider their more advanced or ulcerated stage, when situated on the dorsum of the tongue, are surrounded with little glossy red areolæ, from the natural coating around them being removed, and when studded over with them, give that organ an oddly mottled look, and it may be that a deep fissure runs down its centre, or the whole coating may have peeled off, giving the sound parts the glossy beef-steak appearance. At the commissures of the lips, and round the anus, it would be difficult to say when, or if, strictly speaking, they can ever be said to ulcerate, their appearance remaining but little changed throughout. Indeed, they may be said to ulcerate only on the tonsils, tongue, and inside of the labia pudendi, and merely to vesicate elsewhere. In front of the scrotum, or on the pubes, the ulcerated tubercle assumes the form of a crust or scab. When met with on the scalp there is a crust also; and no doubt, were they to appear over the body generally, and thereby be exposed to evaporation, this would be their usual form. Their appearance on the female parts of generation is so accurately described by Mr. Johnson, that I



would only be copying that gentleman's words in attempting a description; but I may take this opportunity of stating that sibbens caught by coition are not always accompanied with gonorrhœa, and are oftener without than with that discharge, particularly in males.

Sibbens, at the end of a month from their commencement (and we are but rarely consulted so early) are, in ordinary cases, confined to one or both tonsils,; these are seemingly in a state of superficial ulceration, and covered with a sort of thin, whitish slough. To these who wish to become acquainted with the disease, I would say, mark this so-called slough or hazy-whitish appearance: it attends the disease throughout, and by it alone the experienced eye can at once make a sure diagnosis. In all other sore throats, where a slough is formed, or lymph thrown out, the white has a dense appearance, and *well-defined border*; but here it is thinner, and *blended or shaded off*, till lost in the surrounding inflammation. The termination, again, of the inflammation, in the two cases, is reversed: in sibbens it terminates up on the palate, in an abrupt edge; whereas, in common sore throats, it is in general insensibly lost. With this state of the tonsils, there is invariably enlargement of some of the glands under the lower jaw, and these two symptoms constitute the disease for the first four, five, or six weeks, the patient merely complaining of slight soreness, when in the act of swallowing any thing hard. Soon after this period, the condylomata make their appearance on other parts of the mouth, and by the end of six or eight weeks begin to rise up round the anus.

Between the second and third month the disease is at maturity, and presents the following characters:

When the parts about the glottis have become implicated, the patient is hoarse—this he may or may not be. We look into his throat—the tonsils and edge of the loose palate have a granular appearance, and are as if thinly whitewashed. The palate and uvula have a thickened and contracted look—do not rise and fall with their usual freedom, and up from them there is a blush of inflammation, ascending even as far as the roof of the mouth, there terminating in a well-defined border. At or immediately within each commissure of the lips is a cluster of flat, warty excrescences; a few similar ones, it may be, exist on the back part of the tongue, or round its edge, or inside the cheeks; and invariably, at this stage, a bunch of them is found round the anus, attended with a red blush, extending an inch up on the nates.

Such are the symptoms that attend an ordinary case of this disease; but cases do occasionally occur of a more virulent character at the outset, which give rise to all the pain and difficulty in deglutition experienced in ordinary sore throat. We also occasionally meet with a rash resembling measles or roseola, which, from its early appearance, cannot be ranked properly as a secondary symptom. The disease sometimes, though rarely, attacks the toes also.

I am aware, that even in the ordinary form of sibbens, that is in those cases where the virus has been introduced into the system by



the mouth, the condylomata often appear on the perinæum, groins, and genital organs by simple extension, but in all cases where they are first met with on these parts, the disease has been caught by coition. When caught by coition, the inguinal glands become early affected; but have no tendency to suppurate here or any where else. The tonsils in this form seldom become affected in less than six weeks, and sometimes never during the whole course of the disease. Without giving a detailed account of the symptoms, I will merely give a short history of a single case of the very worst kind, which, with its branching, will include all the phases of the affection I have ever seen.

A respectable farmer's son came to me with symptoms of clap, such as running, redness of the lips of the urethra, &c., but with little or no scalding in voiding urine. He soon after got slight gonorrhœal ophthalmia and sibbens. Shortly after him a servant lad from the same quarter applied; he had yaws, as the disease is commonly called on the tonsils, gonorrhœa without scalding, condylomata on the scrotum, and a sore at the orifice of the urethra having the look of chancre, which, on healing, produced stricture, and obliged him occasionally to use a bougie for a long period afterwards. I had made inquiry of this lad, and was not surprized at a dirty female servant from the same house handing me a note from her mistress, requesting me to examine the bearer, as she had become so loathsome that the other maids had refused to sleep with her. And little wonder; from beyond the anus to above the pubes, and for three or four inches down the thighs, she was scalded and studded over with these ulcerated condylomata. Between her toes were what had the look of deep white sloughs, but were in reality only a sort of watery growths as distinctly seen where they emerged from between the toes. This woman married, and had her first child about two years after I had attended her. The child, some time after its birth, began to whine and cry incessantly, became hoarse, the mouth and fauces got fiery red, as did the inside of the *alæ nasi*, and out from them emerged a kind of eczema that gradually extended itself over the face, head, and body, where it met with its fellow that had emerged from the anus, and ultimately completed the child's destruction. Her second child narrowly escaped the same fate. This woman at first denied ever having had any sore about her from the time I had attended her, but at last admitted her having had two or three *boils*, and showed me a sore between the right mamma and arm pit, about the size of a shilling, of a circular shape, with livid and undermined edges. This is almost the only sibbenitic ulcer I ever met with. I might have suspected this case as having been mixed up with the true venereal, but for the fact of having repeatedly met with cases similar in all its branching, only milder in degree, and wanting the ulcer. Moreover, such a thing as lues among our moorland community is exceedingly rare.

The secondary symptoms of sibbens, with the one exception already mentioned, are, so far as my observation goes, wholly confined

to the skin, and are of a trifling kind. The pityriasis-like stains are the most common. These appear on any part of the body, the breasts and arms, being the most easily accessible parts, have been to me the most common. They vary in size; their colour may be red, reddish brown, yellow, or slightly leaden; they are at times slightly scaly. Small patches of psoriasis are also occasionally met with; indeed, I think the former sometimes runs into the latter by becoming slightly elevated, reddish, and desquamating. In a very few instances only, and not for many years, have I seen any thing like ecthyma, and can only recollect that some of the crusts were broad as a sixpence, and very few in number, a proof that the disease is becoming milder in its character. We often hear of the constitution being contaminated by the disease as evinced by destruction of the palate, bones of the nose, sibbenitic ulcers, &c.; and I know a few individuals here with permanently impaired voices who are said to have had sibbens in their youth; but if such cases ever do occur from the disease itself, they must now be rare indeed, since after practising in a district of country where yaws are very common, and treating many hundreds of cases, extending over a series of twenty-seven years, I have met with nothing beyond what is already mentioned.

In regard to the period of incubation, or the length of time that may intervene between exposure and the first symptoms of the disease, I have never been able to arrive at any satisfactory conclusion. The first symptoms are in themselves so trifling as often to be overlooked, and early application is never made; nor can patients often tell when or how they became contaminated. It is said by some writers to be from seven to ten weeks; and the fact of one after another in a family being often attacked for months after the most rigid precautions had been put in force, favours this long period. In an unfortunate case, where, in attempting to reduce simply enlarged tonsils, the disease (I had reason to believe) was communicated by the quill containing the caustic, the complaint was perceptible within the fortnight. But allowing there had been no taint previous to the application of the caustic, the case is not exactly in point, being one of inoculation.

It is said that sibbens, like the yaws of the West Indies, undergo a natural cure, after running a course of from six to twelve months. When they might undergo a natural cure I cannot tell; but of this I feel certain, that they have a strong tendency to run a course in defiance of treatment. A case from three to six months' standing, is easily cured in a fortnight, and in all probability permanently so; not so a case of so many weeks. We cure them, 'tis true, but two to one the case is again in our hands in six weeks, and this it may be again and again.

This is so true, that we never can warrant a house *permanently* clean in less than a year, and sometimes not for a much longer period. Some may say we repel the disease by injudicious topical treatment, and thus keep it, pent up, as it were, in the system, for a longer



period than would otherwise be required for it to run a natural course ; but I have seen a case in no way interfered with by treatment remaining at the end of two years in all its primitive perfection and simplicity. On the other hand, it might be said, we do not continue treatment long enough ; but then how does it happen to be successful in the one case, and not in the other ?

This strong tendency in the virus, when once introduced into the system, to run a course, coupled with the fact that I have never met with sибbens twice in the same subject, has impressed me with the belief, that, like West Indian yaws, a first attack affords indemnity from a second. Those writers on the disease who have had the best opportunity of judging seem silent on this point, and the vulgar opinion, prevalent until lately, is lost, that one attack *lasts a man's life-time*.

“ Sibbens,” says Dr. Hibbert, “ are the engendered product of rank uncleanness ; but they are only fed and fostered by unwholesome food and filth : this is all. The disease is propagated by contagion, and contact too of no common kind, being no more caught by sleeping in the same bed, than is the venereal. This may not have been the case at an earlier period, when the tubercles would seem to have spread over the body generally. At the present day, we act under the belief, that the poison can only take effect where applied to a delicate membrane, such as that which lines the lips, mouth, and genital organs, or to an abraded surface. Its application may be either direct, or indirect through the medium of tobacco pipes, glasses, spoons, &c. The most common mode by which the disease is communicated is direct, by contact with the lips in billing and cooing ; next in point of frequency, is smoking from the same pipe ; it is also, as has been stated, occasionally caught by coition.

“ Whether sибbens, the venereal, and the yaws of the West Indies originally sprung from a common stock, forms an interesting subject for inquiry. It is perfectly plain, however, that each, now, at least, is equally, nay, better entitled to rank as a distinct disease than variola, varicella, and the other minor pox. Sibbens are distinguished from the venereal, by the greater number of their sores, by their elevated character, and by the ulceration in the former being much more superficial than in the latter. The first rarely contaminates the constitution, the last often. Between sибbens and the venereal condyloma there does not appear any difference ; and I will be much astonished indeed, if, on farther inquiry, the latter is not found to be often communicated by the mouth. Whether sибbens may have wandered from our mountains to the cities, or venereal condyloma from towns to us, it is not for me to decide.

Sibbens, and the yaws of the West Indies, retain some very important characters in common, such as the whitish ulceration of the tonsils, the fungoid character of the sores, a first attack probably giving immunity from a second, and their appearing to run a somewhat similar course in point of time. Yet in some respects they



differ: sibbens, from first to last a trifling disease, are never ushered in by any constitutional symptoms, never induce a cachectic state of constitution, and the sores are confined to the neighbourhood of the mouth and great outlets. Regarding West Indian yaws, the reverse of all this is true.

However wrong Dr. Hibbert may be in regard to sibbens being the offspring of uncleanness alone, I cannot do better than copy his means of prevention: "The importance of cleanliness," says he, "admits of a ready explanation; the poison upon which this affection depends is more or less deleterious, according to the various degrees of concentration which it undergoes; yet even in its most concentrated state its action is so gradual and so slow, that if common acts of ablution were daily practised, long before it could have time to act, it would stand every chance of being either rendered comparatively inert, or even of being totally removed from the surface of the body." In another place he says: "Let but the judicious treatment of patients afflicted with sibbens be accompanied with the daily immersion of such as are exposed to the contagion in any river, and the sibbens in a whole parish will be eradicated in a twelvemonth." I have been in the habit of advising all who are exposed, to a thorough washing with soap and water of the whole body, two or three times a week. As an instance of the effects that may be assigned to preventive measures, the disease had been from 1825 to 1835 gradually on the increase, when about the latter period the alarm became so great as to give rise to a general distrust in all intercourse, and the consequence was a marked decline in the complaint. It was a curious fact, that during the ten years' reign of sibbens, itch was in complete abeyance; and scarcely a case was to be met with, till about 1836 and 1837, when it took the lead with more than its usual virulence.

If cleanliness is of importance as a preventive measure, it is no less so as a means of cure. In country practice, we in such cases substitute a thorough washing for the bath. Mercury has a specific effect in sibbens, and is in general at once resorted to. The general health being in no way affected, the patients are often allowed to follow their usual out-door employments, and take a blue pill night and morning, till the gums are slightly sore; in short, a gentle course of mercury continued for four or five weeks; while, at the same time, and in all stages of the disease, we freely apply a rod of caustic to the sores in the mouth, as often as circumstances will allow,—deliberately running it into all the folds around the tonsils. When a whole family are affected, and live at a distance, they are instructed how to apply the caustic every second day to each other, with a brush and strong solution. The condylomata about the anus and genital organs disappear with great rapidity under the local application of the ungt. hydr. fort., and attention to cleanliness. This disease is so completely under the control of mercury, that it rarely resists its influence beyond two or three weeks, even without any local application; but so strong is its tendency to run a course, that patients will sometimes

return on our hands again and again, even after full salivation. This is particularly the case with the better classes who make earlier application. It is no uncommon occurrence for patients to return on the following year, and the very same month at which the disease first made its appearance the year previously, with little painful sores on the edge of the tongue : one, in particular, on the very tip. These I attributed to the mercury, and contact of the teeth, till I found them capable of propagating the disease. These, in some constitutions, may appear at the end of two years. Such require caustic only for their cure. When the submaxillary glands have returned to their natural state, and every symptom of the complaint has been gone for three or four months, the patient generally may consider himself pretty secure.

Infants who have caught them after birth, and children, get rapidly and often permanently well by a single grain of calomel daily for two or three weeks.

I have only given the hydriodate of potass a sufficient trial to prove its effects, as far inferior to mercury, and also the tincture of iodine to the sores, as less effectual than the lunar caustic.

For the secondary symptoms, they are now so rarely of the character that indicates a tainted constitution, that under attention to cleanliness alone they gradually disappear.—*London and Edinburgh Monthly Journal.*

*On Cerebral Auscultation*, by S. S. Whitney, M. D., of Newton, Mass.—It is true, “ that there are no physical signs applicable to the brain, such as are dependent on a cause similar to that of the act of inspiration and expiration of the lungs, or perhaps of the systole and diastole of the heart, while in their healthy state ; for the brain, in its normal condition, can of itself develop no physical phenomena. The thing is incompatible with a physiological state of the organ.

There are, however, certain conditions of the brain, in which a new order of things has been discovered to take place ; and the very fact that it is known and can be shown to exist *only* in certain derangements of that organ, while in its physiological condition, signs which are purely negative in their character are developed, proves the former to be, not only a physical sign, but one which is most surely pathognomonic of some derangement of the organ itself.

Such then, being the case, can it be shown that the organs within the cavity of the cranium are “ so disposed ” as to render the art of auscultation or percussion in any way available, and that these physical signs are applicable to the brain ? The very thought ought to commend itself to the consideration of every true lover of science.

Heretofore, and even at the present moment, the diagnosis of diseases of the brain rests solely upon the plausibility of physiological and pathological induction. But inductive signs are known to vary, and to vary exceedingly in organs of the most simple structure, from the force of the slightest variation of circumstance. How infinitely



more complex and variable then, must they be when dependent upon the mere breath of circumstance, over an organ of such exceedingly complex structural organization, as that of the brain! Yet in regard to this organ, although we may never, perhaps, attain to that degree of precision, I might say physical certainty, which has been attained, in regard to diseases of the organs of the thorax, may we not rationally anticipate, that, with what industry and perseverance can accomplish, and with what may be accomplished by a newer and more rational method of investigating its diseases, our knowledge may become as certain, and our diagnosis of the diseases of the brain, in a degree, may be made with as much precision, as that of the heart and lungs!

In auscultating the heads of healthy children, four very different and perfectly distinct *bruits* are heard passing through the brain. They are evidently the sounds which are produced by the act of respiration and deglutition, by the impulse of the heart and the voice.

The one which first attracts the attention, is that which is produced "by the impinging of the air against the walls of the nasal cavities during the act of respiration." It commences and terminates with the respiratory act, and in this respect, is peculiar and easily recognized. This sound has been denominated "*the cephalic sound of respiration.*"

"The second sound which strikes the ear, is one whose impulse seems to be transmitted from a distance. It is evidently that of the heart, and is a soft mellow sound, resembling that produced by softly palpiating the cheeks when distended with air." This sound is synchronous with the action of the heart, and varies in frequency and intensity, as the contractors of that organ vary in rapidity and power. This has been called the "*cephalic sound of the heart.*" The sharp, piercing, and vibratory sound, which accompany the act of crying or speaking, and which can be so distinctly heard over every portion of the skull, has been termed the "*cephalic sound of the voice.*" It varies somewhat in its tone at different parts of the head, being the least shrill and piercing at the unclosed fontanelle. The other sound which attracts attention, and the only remaining one of the normal sounds of the head, attends the act of deglutition. It is a dull, massive, liquid sound, and so peculiar, that when once recognized, it never can be mistaken for any other *bruit*. This is the "*cephalic sound of deglutition.*"

Such are the *bruits*, which are heard in the heads of infants before the closure of the fontanelle. As age advances, and the density of the brain and cranium increases, these sounds become somewhat modified. The change which some of them undergo in the numerous lesions of the encephalon is, however, exceedingly slight; still, others are so manifestly changed in their character, as to become symptoms of cerebral disease.

Besides a modification of the "*cephalic sound of the heart,*" under the influence of certain diseases of the cranium, to a consideration of which this paper is more particularly devoted, I shall have occasion,



hereafter, to speak of an equally striking modification of the "cephalic sound of the voice," which is found to accompany, and which I think is characteristic of a *particular* affection of the brain. It resembles, as nearly as the nature of the organs could admit, the sound which is known to accompany the effusion of fluid between the two pleuræ of the lungs, and is never heard, except in those diseases of the brain which are attended with a similar effusion between the membranes by which this organ is enveloped. It is, indeed, no more nor less than a simple *ægophony* of the brain; and as such, I doubt not, but that hereafter it will be found a valuable acquisition to the category of signs, which belong to this obscure and difficult class of lesions. During nearly five years, in which the observations herein detailed have been made, I have noticed the "cephalic bellows-sound," or some modification of it, in no less than *eight* different and perfectly distinct lesions of the brain. In some of these, it has been a well-marked, constant, and invariable symptom; in others, it has been less so, while in all it has been sufficiently striking to render it a valuable and independent physical sign.

The different diseases in which this symptom has been present and characteristic, are thus arranged:

1. In simple congestion or irritation.
2. In acute inflammation of the brain, with or without effusion.
3. In chronic hydrocephalus.
4. In acute or local compression of the brain.
5. In induration, or scirrhus transformation of the substance of the cerebellum.
6. In ossification of the arteries of the brain.
7. In aneurism of the basilar artery.
8. In aneurism, and certain hydrocephaloid diseases.

[The author here gives four cases illustrative of the light thrown on the diagnosis by auscultation.]

I shall now speak, in the second place, of the cephalic-bellows, as connected with an *acute inflammation* of the brain.

Within the time that these observations have been made, I have noticed this phenomenon in nineteen different and distinct cases of acute inflammation of the brain. It was present in all of them as a prominent and unequivocal symptom; and as such, its progress and development were carefully noted, from the commencement to the termination of the disease in each case. [Three cases are here detailed at length.]

Beside the bellows-sound already described, my attention was, for the first time, attracted to the presence of a *peculiar*, and to me novel sound, *connected with the passage of the voice* through the brain and skull. It has a much sharper and shriller tone than that of the natural voice, and seems to strike upon the ear, as though the shrill notes of the clarion were echoing through the vault of the cranium below. It has, moreover, another character which renders it altogether *so unique*, that when once heard, it cannot easily, the second time, escape recognition; I mean a trembling-brazen-vibratory sound,

which in imagination, resembles nothing so much as the noise produced by singing, crying, or speaking through the teeth of a comb, previously covered with a bit of silk, parchment, or paper. In two or three instances, since recording this case, I have noticed that this sound corresponded almost exactly with the trembling, bleating sound which is so characteristic of the *ægophony* of the lungs. And, indeed, so nearly does this sound resemble in every essential particular that of *ægophony*, and so nearly also do the pathological conditions, necessary to the development of these phenomena, resemble each other, that I know of no appellation, by which *this* can be better designated from *that*, than by applying to it the term "*encephalic or cerebral ægophony*." But to resume the history of this case, it will be sufficient to state, that the *bellows*-sound still remained a constant and important symptom, so long as the powers of life were well sustained, and failed only when they had become so much enfeebled, as to render existence, every moment, an improbability. The *ægophonic* sound of the voice, on the contrary, was equally present and distinct from the time of its first appearance, up to the moment when the last groan told that life had indeed departed from the body.

I have noticed the cephalic bellows-sound in *actual and local compression of the brain*.

This physical phenomenon of the encephalon has been observed also in *induration, or scirrhus transformation of the substance of the cerebellum*.

I have observed, in the sixth place, the cephalic bellows-sound, as a symptom of *ossification of the arteries of the brain*.

In the seventh place, the cephalic bellows-sound has been observed accompanying an *aneurism of the basilar artery*.—*Abridged from a long paper in the American Journal of Medical Sciences for October, 1843, and London and Edinburgh Journal.*

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*Dr. Marshall Hall on the Mechanism of Vomiting, in a Letter to Dr. Anderson.*—14, Manchester-square, 15th Jan. 1844.—

DEAR SIR,—I beg to thank you for your kind and polite present of a copy of your interesting paper on the *Mechanism of Vomiting*, which I received this morning. There are *three* paragraphs in it, on which I beg to make a few remarks, which you will probably do me the favour to communicate to the excellent Journal in which your own appeared.

The first of these occurs page 8: "The opinion that the muscular fibres of the diaphragm are actively engaged in vomiting, seems to be supported by two cases related by Boisseau, in which that muscle was torn by violent vomitive efforts. It would, I apprehend, be difficult to explain this occurrence by a reference to Dr. Hall's theory; for the mere fact of the diaphragm's suffering compression in common with the viscera of the chest and belly, many of which possess weaker powers of resistance, would not account for its laceration."

My view of this event is, that it occurs in the final, actual, full, and violent expiration which uniformly takes place at the close of



the act of vomiting. The larynx is opened, the air in the thorax escapes; the contraction of the abdominal muscles proceeds, and all the force of that contraction is applied to the diaphragm, and carried upwards to the uttermost. It is the same force, the same violent expiration, which so beneficially empties the bronchial tubes of the redundant mucus in certain cases of bronchitis, in which emetics are prescribed.

The second paragraph to which I have alluded, occurs at page 9: "Violent efforts of vomiting were immediately induced, causing the expulsion of a considerable quantity of milk; and, at the same moment—that is, during the effort by which the milk was discharged,—the diaphragm became *tense and rigid*, and *descended* towards the abdomen." And: "on introducing two fingers into the opening which I had now made into the abdomen, I felt the diaphragm to be strongly *contracted* during each effort of vomiting." That the diaphragm "*descended*," and became "*tense and rigid*," during the act of vomiting may be admitted; but that it "*strongly contracted*," is, I think, more than the mere contact of the fingers could teach us. The account is not, it appears, limited to a detail of the fact, but involves a statement of the mode or *rationale* of that fact. My view of the case is this: at the commencement of each act of vomiting, which is an act of the muscles of expiration, the contraction of the intercostal muscles carries the diaphragm forcibly downwards, part of the parietes of the abdomen yielding somewhat to this forcible pressure. At this moment it may be found to have "*descended*," and to be "*tense and rigid*."

I have only to add, that if the diaphragm does contract during the act of vomiting, it *must*, in exactly an equal degree, *counteract* that process, which is one of expiration, whilst the diaphragm is an organ of inspiration. Such contraction is not usual in nature's operations.

The last paragraph on which I beg to remark occurs at page 11. It relates to the fact of the ingurgitation of air into the stomach during the state of nausea which precedes the act of vomiting. You observe: "Dr. Hall does not allow the diaphragm any share in the production of *this* phenomenon." Had I indeed made this assertion, I should certainly have committed a grave error. But you have only partly quoted my statement, of which I must here adduce the remainder. It is this: "It is not improbable, too, that in some instances of vomiting, in which the action of the abdominal muscles was subtracted, a similar effort of inspiration has drawn substances from the stomach into the œsophagus, which has eventually expelled them by an inverted action." It is of *these two* actions that I have said, "Neither of these phenomena could result from any action of the *diaphragm*;" and not of the ingurgitation of air into the œsophagus during the state of nausea, which is, as I imagine, effected by an act of inspiration, in which the diaphragm really does take a part.

I should have been glad if you had noticed the subject of vomiting from the œsophagus, and discussed that of vomiting from the stomach, when this organ exists (in the case of hernia), within the cavity of



the thorax at greater length; for the cases of what may be designated *hyper-diaphragmatic* vomiting appear to me greatly to elucidate this singular act of ejection in general. I am, dear Sir, your's very truly,

MARSHALL HALL.

TO DAVID ANDERSON, M. D., &c.

*London and Edinburgh Medical Journal.*

*On Dislocations of the Astragalus, with the lower ends of the Tibia and Fibula inwards, illustrated by Cases, by Henry Hancock, Esq., Surgeon to the Charing-Cross Hospital.*—The object of this paper is to direct attention to an injury of comparatively rare occurrence—dislocation of the astragalus from the os calcis and scaphoides, the ankle-joint remaining entire. The writer, after alluding to numerous authors who considered that such an accident could not occur, gives an account of the only four cases he has met with in the works of various writers, viz., two in the last edition of Sir A. Cooper's work on Dislocations and Fractures, edited by Mr. B. Cooper; one related by Professor Harrison in the Dublin Journal, vol. xv., designated "Displacement of the Foot outwards, with Fracture of the Fibula;" and a fourth described by Dupuytren in the Leçons Orales, vol. i. p. 225, as "a fracture of the fibula with dislocation of the foot inwards." Both these latter titles the author considers erroneous; for it is very doubtful whether, in reality, the astragalus with the lower ends of the tibia and fibula are not the parts displaced; and even if this be not the case, it is only a portion and not the whole of the foot which is dislocated.

The following cases are related by the author.

John Middleditch, a strong, healthy man, æt. 24, was admitted into the Charing-Cross Hospital, under the author's care, on the 5th of December, 1840, with an injury to the right ankle, having fallen from the top of one of the vats in a brewery. Four days afterwards, when the swelling was reduced, it was found that the fibula was fractured about three inches above the ankle; the axis of the tibia, instead of falling on the centre of the foot, was thrown inwards and slightly forwards, giving the leg the appearance of being twisted in that direction. The position and direction of the foot were not materially altered, further than by its projecting considerably on its outer side and the toes turning slightly outwards, but its dorsum looked upwards as in the natural condition. Upon carrying the finger along the outer edge from the heel forwards, the anterior extremities of the os calcis, where it unites with the cuboid bone, could be felt distinctly, whilst above there was a considerable cavity instead of the prominence formed by the astragalus and external malleolus. By pressing the finger along the dorsum of the foot, a depression could also be distinguished behind the posterior margin of the scaphoid bone. On the inner side of the foot was a prominence corresponding to the internal malleolus, of which the inferior margin could be distinctly defined; and anteriorly and inferiorly, another projection, more prominent, evidently caused by the head of the astragalus, over which the skin

was tense, thin, and vesicated. The distance between the internal malleolus and prominence of the os calcis was somewhat greater than in the sound foot, and that between the lower end of the inner malleolus and the sole of the foot diminished above an inch. The ankle-joint was still capable of flexion and extension, and there was very considerable motion in the centre of the foot, corresponding to the calcaneo-cuboidal articulation, forming as it were a double joint. It was concluded that the astragalus had been forced from without inwards, off the upper articulating surfaces of the os calcis, carrying with it the lower ends of the tibia and fibula, most probably resting upon the lesser process of the os calcis. The various steps by which reduction was effected are next described.

The integuments over the point of pressure sloughed and separated on the third day after the reduction, leaving the anterior part of the astragalus exposed in its proper position; and this was succeeded by considerable discharge for several days, in the course of which, the internal calcaneo-scaphoid ligament sloughed and came away; the astragalus being now no longer restrained in that direction, gradually twisted round upon the calcis, until at length a large portion of its head protruded through the opening in the integuments: this prevented the wound from closing, and, as the bone could not be kept in its proper position, but had lost its articular cartilage, and was passing into a state of necrosis, he subsequently, with a small saw, removed its head to the extent of about three quarters of an inch; after which the wound gradually healed, the parts became consolidated, and the man left the hospital cured in July, just seven months after the accident.

Ten months subsequently the following report was made:—He walks as well as he did before the accident, without stick, or artificial support of any kind. The leg is larger than the opposite one, and there is some thickening around the ankle; but the motion of the joint is good, and the direction of the foot and the situation of the malleoli natural: he is able to do his work, which at times is very heavy, as well as ever he did, his leg being entirely free from pain.

The particulars of the last case are taken from the surgical notes of the late Mr. Howship, and relate to a preparation in the possession of the Royal College of Surgeons. It appears, from the position of the bones, that the same accident had occurred as that described in the former case; but that the dislocation had not been reduced. The author enters into a detailed account of the bones. He then concludes his paper with some observations on the treatment to be pursued in these accidents, giving the opinions of various writers on dislocation of the astragalus.

Mr. Lloyd made some general observations on the subject of the paper, and particularly combated the propriety of amputation, save in extremely rare and desperate circumstances. In the vast majority of instances of dislocation of the astragalus, amputation, as it was not required, so was it altogether inadmissible. In former days, indeed, the operation was even commonly had recourse to; it was one of the



old canons of surgery that it should be so; and he quoted the case of a late governor of Newgate, whose leg he had himself, when a young man, dissected, after it had been removed by a couple of old surgeons, where he found the injury so trifling, that he plainly saw the step which had been taken as altogether unnecessary.

Mr. Hancock, who seemed to have mistaken the tendency of Mr. Lloyd's remarks, adopted them as justifying the amputation which he had advocated. Mr. Lloyd explained, and Mr. Hancock was somewhat tart in his reply to the surgeon of St. Bartholomew's.

Mr. Quain directed Mr. Hancock's attention to the true bearing of Mr. Lloyd's remarks, who had, in fact, quoted the amputation which had been performed on the Newgate governor as an instance of antiquated surgery, a practice which certainly would not generally be imitated in the present day.

Mr. Davies related an anecdote of Mr. Abernethy, whose surgery was always largely tempered with humanity, and who never took up the knife without regret:—A London merchant had suffered a dislocation of the astragalus at some considerable distance from London, where, we presume, Mr. Davies was at that time settled in practice. Mr. Davies recognized the nature of the injury, and aware of the delicate point of surgery he had to deal with, he recommended a consultation. Mr. Abernethy was selected by the patient, and he arrived at Mr. Davies's house about two o'clock in the morning, his whole travelling baggage consisting of a shirt tied up in a pocket-hankerchief. Though he arrived at two o'clock, Mr. Davies, nevertheless, found him up and walking in the garden when he put out his own head between five and six. On seeing the patient Mr. Abernethy approved the temporizing measures that had been pursued, totally repudiated amputation, and took his leave. The patient made a good recovery; and if he did not gain a leg that was as supple about the ankle-joint as the other, he still had a limb which was a great improvement upon a wooden one, and that served him to stump about for many a long year afterwards.—*Medical Gazette*, April 5, 1844.

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*Case of Obstruction in the Intestinal Canal, terminating favourably on the ninth Day by spontaneous Vomiting and Evacuation of the Intestine's Contents, by Sir George Lefevre, M.D.*—The subject of the present case was a little girl of twelve years of age, of a very delicate constitution, strongly marked scrofulous disposition, and with very feeble digestive powers, so that she was unable at all times to digest fruit or vegetables. She had been attacked by an epidemic autumnal cholera, which prevailed amongst children in the town where she was residing, and which yielded to the usual mode of treatment. Soon after the termination of this, she was attacked by a disease of an opposite nature, and became obstinately constipated, whilst the stomach rejected every thing that was taken in. Purgatives had been employed in every shape, but without effect; leeches had been applied to the abdomen, which had been fomented freely.



Such was the history of the case, which I received from the two medical men in attendance previous to my seeing her. I saw her on the 27th of August in the afternoon. She was much flushed in the face, had an anxious countenance, a small, quick, compressible pulse, a cold, moist surface, the extremities being colder than natural. She suffered from distention of the abdomen, without complaining of much pain, and she vomited continually a green, bilious-looking fluid. As no inflammation was apparent, and as more depletion was not, under the existing circumstances, indicated, soothing measures were employed. The vomiting was the most annoying symptom, from its frequency rather than from any distress which it occasioned, for this dark-green fluid was thrown up without much effort. A small blister was applied to the pit of the stomach, and small doses of prussic acid administered in almond-milk. This treatment seemed to check the vomiting for many hours successively. She passed a tranquil night, but no relief to the bowels had been obtained by stool, and the abdomen was much more swollen. Croton oil was given internally and in clyster during the day, and as warm applications seemed to have no effect, bladders filled with ice were applied all over the belly. The patient was restless and uneasy, continually changing her place in bed, but this arose from distention rather than from any acute pain. About midnight of the 28th, she complained of twisting and severe pain in the bowels, of a colicky nature; there was also more pain upon pressure than previously, and as opiates were administered without benefit, I applied a dozen leeches to the abdomen with immediate relief to the distressing symptoms, which subsided soon afterwards. She got some sleep, and was free from pain when awake. I was obliged to return to London, and did not see her again till the afternoon of the following day. I learned from the physician in attendance that she had passed the day on which I left her pretty well, but that at midnight the same symptoms recurred as on the night previous, and, notwithstanding her state of great exhaustion, he had again applied leeches with benefit. He informed me that the vomiting had returned, and that the matter brought up was evidently from the ilium, and the seat of the stricture seemed to be about the caput cœcum.

There was no question, upon minute examination, that the matter vomited up proceeded from the small bowels. The distention was now very great, respiration was much impeded, and the little patient suffered severely. A long elastic tube was introduced into the rectum, and which was carried into the colon, into which water was forced by a pumping syringe. The operation was productive of great distress to the patient, and was ineffectual as to relief. The night was restless, and the following day the little sufferer seemed much exhausted. The face was colourless, the countenance anxious, the body covered with a cold, clammy sweat, and she expressed herself as if about to die. The bed-room having a southern aspect, and the weather being sultry, I desired that she might be removed into a cooler room. She was carried in the arms to bed, and as she was much fatigued by the

operation I gave her a glass of Madeira wine, which she drank with pleasure, but hardly had she swallowed it, when she made signs for the basin, lifted herself up in bed, and threw up a dark green fluid to the amount of three pints. She experienced immediate relief, and breathed more freely, and the upper part of the body became more loose and compressible. I gave her some more wine, which remained on her stomach; she had no more nausea. Constant friction was maintained over the abdomen, and injections of vinegar and water were repeated every hour. The first was returned without being accompanied by any solid matter, but had a foetid smell. The second was accompanied by pieces of flocculent matter of a membranous appearance, and the fluid returned was horribly foetid, like putrid water in which flesh had been macerated.

She was now enabled to compress the abdominal muscles, and make an effort to go to stool, which the previous great distention paralysing the action of the muscles had prevented her from doing. Much of this membranous matter came away after each injection. The smell was most offensive. About four hours after the spontaneous vomiting she asked to go to the chair, when the bowels gave way, and a large quantity of solid excrement was voided. She passed several more stools in the course of the evening, and then slept tranquilly. The following morning I gave her a dose of castor oil, which produced its desired effect without creating nausea, and I left her convalescent. I learned subsequently from my colleagues that she had a good deal of constitutional fever for four or five days. She recovered in a short time, and her digestive powers are now better than previous to her illness. The obstruction was relieved only on the ninth day of the disease.—*Ibid.*

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*Spina Bifida cured by operation.*—Oct. 17, 1837. An infant, daughter of Mr. Leach, of Skeneateles, eight months old, was operated on by Dr. Stevens this morning for spina bifida. The tumour was seated over the upper part of the sacrum, about three and a-half inches broad from side to side, nearly the same in a vertical direction, and rising about two inches above the surrounding surface, indented along the middle vertically by a thick irregular band of integument. The covering of the tumour was not healthy skin, but a peculiar thin membrane of a reddish colour, traversed by numerous vessels like varicose capillary veins. The healthy integument formed a hard edge at its line of union with the covering of the tumour. The whole swelling was somewhat pendulous, narrower at its base than about the middle, and in size held about the same relation to the size of the infant, as it did at the time of birth. It had been once punctured with a needle, when the child was only a few weeks old. The wound, which had never cicatrized fairly, is now covered with a sort of scab.

In the operation to-day it was punctured with an iris knife, and about four ounces of clear serum, tinged with a few drops of blood, issued from the puncture in the integuments. The child did not appear to suffer any inconvenience from the evacuation of serum, but



it produced a slight sinking at the anterior fontanelle. The child's general health is good. There did not appear to be any deficiency of bone about the outer portion of the base of the tumour. The healthy integument mounted a few lines above the base, before giving place to the peculiar envelope above noticed.

October 20th. The tumour was again tapped on the right side. Not more than an ounce of serum escaped.

October 21st. The tumour was again punctured in three places along its lower edge on the verge of the sound skin. About four ounces of serum escaped without any bad symptoms. The tumour is now somewhat shrivelled, but the diminution does not appear equal to the amount of fluid evacuated.

October 30th. The fluid continued to ooze slowly for nearly twenty-four hours after the last punctures. Since that period, the child has been drooping and fretful, with some febrile symptoms, perhaps partly owing to her teeth. Recently, the sac of the tumour has become inflamed; and within two days, the child has been observed to keep her left leg drawn up, and to cry when it is disturbed. She has taken little or no medicine, excepting a slight dose of magnesia. The tumour is kept wet with a spirit-lotion. The anterior fontanelle is considerably depressed.

The tumour was not punctured afterwards. The febrile symptoms and spasm of the muscles soon subsided; and in a few days the little patient returned with her parents to the country. At a second visit to the city in the spring or summer following, the child was again presented to us for examination. The sac of water had disappeared, and all that remained of it was a small bunch of indurated and corrugated integument.

Two drawings of the disease are given, one taken before the operation, and the other two years after, at which time the child was perfectly healthy.

I think it important to state, that the fluid in the sac was discharged very slowly; at the rate of about three drops in a second, while about one-third of it was left behind; that slight pressure was made upon the tumour after each evacuation, and as far as was practicable in a restless child, maintained there; and that strict injunctions were given to keep the body in a horizontal position. Once, when the head was suddenly elevated, soon after the tumour had been evacuated, a tendency to syncope and spasm was manifested, which disappeared as soon as the child's head was depressed.

*Remarks.*—Considering the analogy between spina bifida and hydrocele of the tunica vaginalis testis, and other serous sacs, we may anticipate a thickening and induration of the sac, with a corresponding degree of contraction in the former case, as well as in the latter. The desideratum then is, to open the sac and draw off the fluid safely. This leads to the inquiry—What are the dangers of the operation?

The first danger is the producing of syncope and spasms, by the too sudden removal of the pressure of the fluid upon the serous cavities in the ventricles and spinal marrow. The means of obviating this danger are, drawing the water off slowly, leaving some in the sac



undischarged, keeping the patient in a horizontal position, and, if necessary, making pressure upon the tumour and upon the head. With these precautions and resources, this danger cannot be deemed a formidable one.

The next danger of which I shall speak, is the occurrence of inflammation of the inner lining of the sac, extending peradventure to the spine and cerebral cavities. There was a period of two or three days of restlessness and feverishness in Mr. Leach's child, which I attributed to this cause, but which disappeared without any particular treatment. Of course, no prudent surgeon would repeat the puncture, until the effects of the previous operation had subsided.

The next question of which I shall speak, is of an entirely different kind, and I infer the possibility of it only from analogy, reasoning from what occurs in some cases of paracentesis abdominis; that is, an habitual increased secretion produced by repeatedly drawing off the water. I should judge, that such a state of things was to be obviated by increasing the degree of inflammation, and of course the thickening and contraction of the sac, after each puncture, by pressure sufficient for the purpose.

These considerations lead me to conclude, that the puncture of spina bifida may be made with very little danger and a fair prospect of success.—*New York Journal of Medical Science.*

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*Case of Ovarian Tumours—both the right and the left being removed at the same Operation, by J. L. Atlee, M.D., of Lancaster, Pa.*—MY DEAR DOCTOR—A few days ago I was invited by my old friend, Dr. Jno. L. Atlee, of this city, to accompany him on a visit to the patient from whom he removed, seven weeks ago, *two ovarian tumours*. As the operation of removing both diseased ovaria had never been previously performed, I felt much interest in seeing the case. We found the patient waiting to accompany her surgeon on a morning drive, agreeably to previous arrangement; but the Doctor was prevented doing so, in consequence of unforeseen professional engagements. The lady, who is under thirty years of age, and has never been married, had suffered from ascites for the last three years; and for this disease she had been tapped four times, the ovarian tumours having remained undetected until after the third *paracentesis*. Convinced that these enlarged ovaria were the cause of the dropsy, Dr. A. proposed their removal, to which the heroic patient consented.

An incision about nine inches in length, in the course of the linea alba, and commencing at the pubes, was made into the abdominal cavity. The left ovarian tumour was found attached merely by the round ligament, which floated free in the abdomen; while the tumour on the right side, adhering about two-thirds of its extent to the brim of the pelvis and the omentum, required some careful dissection in its removal. They were both removed without any copious hæmorrhage, and this large wound, which was brought together by the interrupted suture, is now, seven weeks after the operation, completely united, with the exception of the lower extremity, where the

ligatures upon the round ligaments still remain. As not an unfavourable symptom has thus far been presented, the patient may be safely pronounced out of all danger incident to this terrible and unprecedented operation.

Although the removal of diseased ovaria had its advocates in the last century, the operation (*vide Good's Study of Medicine*) having been actually done, and successfully too, in 1776, by L'Aumonier, surgeon-in-chief of the hospital of Rouen; yet, in consequence of its condemnation by such high authority as the names of De Haen and Morgagni, it became so completely neglected, that when Dr. McDowell, of Kentucky, reported three cases in which he had operated successfully, it was discredited by the *Medico-Chirurgical Review*; but this opinion was doubtless due in part to certain improbabilities connected with the details.

Professor N. Smith, of Yale College, reported, in 1822, in the *American Medical Recorder*, an interesting case of the successful extirpation of an ovarian tumour. In 1826, Dr. David L. Rodgers, of New York, performed the same operation, and so successful was the issue, that "in six weeks from the period of the operation, her catamenia had returned, and her health entirely recovered." This operation has been done no less than five times by Dr. Clay, of Manchester, and each time, too, successfully. Dr. Reese, in his notes to Cooper's *Surgical Dictionary*, says, that in the *London Medical Gazette* for 1829, three cases of extirpation by Carysman, are reported by Dr. Hopfer, of Biberback; and that of these, two proved fatal, while the third was so successful, that the woman subsequently bore children. In the *Edinburgh Journal*, for October, 1820, it is related by M. Lizars, that he attempted to extirpate an ovarian tumour; but no tumour was found, and the case proved fatal. Two cases of the operation have since been reported by the same distinguished surgeon, but the results are not known. Dr. Alban Goldsmith, of New York, has also operated by extirpation thrice; the first two having been successful, while the last proved fatal; but in the third case he ascribes the unsuccessful issue solely to the circumstance, that he had trusted to an animal ligature, which, giving way prematurely, caused the supervention of secondary hæmorrhage within the abdominal cavity. By Professor Mussey, of Cincinnati, a successful case is reported, in which he opened the sac, and effected adhesion between its walls.

As regards the extirpation of these tumours, the late Doctor McDowell, of Kentucky, may be considered a sort of pioneer, having done it oftener and more successfully than any other surgeon in the world; besides he laid open the peritoneum to a great extent for extirpating other abdominal tumours. But Dr. Goldsmith relates a curious case in which he was concerned with this pioneer-operator. The patient, who had suffered, during a considerable period, from ascites, had tapped herself no less than ninety times; and discovering at length a tumour, which she supposed to be the cause of her dropsy, she made application to Dr. McDowell for its extirpation. The event,



however, proved, much to the surprise of the two surgeons, that the tumour was merely a mass of the intestines conglomerated by adhesions. The operation was abandoned, and the woman died ; but this case, as well as that of Lizars', should certainly not be placed in the category of unsuccessful operations for this disease.

In view of this liability to error in our diagnosis, this operation is even now condemned by many. "I have known," says Dr. Reese, in his notes to Cooper, "a number of these 'exploring operations,' as they are called, result disastrously, like Dr. McDowell's case ; for in several instances the operation has been abandoned, but the patient has died on the table. To cut into the abdomen in an exploring expedition may well be regarded as of questionable morality, and is 'most villanous surgery.'"

I have thus briefly summed up a history of the operations for diseased ovaria, under the belief that these cases, combined, tend to establish a new principle in surgery, viz., the comparative safety of making large openings into the cavity of the abdomen. Wounds of the abdomen, involving lesions of the intestines or other abdominal viscera, with the operations for strangulated hernia, have been the only cases in which surgeons have interfered with the abdominal contents ; and the great fatality of these cases always inspires much apprehension when the abdominal cavity is opened. The successful result, generally speaking, attending the extirpation of enlarged ovaria, would seem, however, to show that operations within the abdomen are by no means so fatal as the profession have been led to believe—an opinion that is substantiated by the difficulty so frequently experienced in exciting inflammation in the tunica vaginalis testis, in the operation for hydrocele. Besides, in the case before us, in which both ovaria have been extirpated, for the *first* time, we have additional evidence of the comparative safety of this operation. Here, then, is another of the triumphs of American surgery,—the introduction of an operation with much practical effect, which is regarded in Europe, with few exceptions, as unsafe and impracticable.

The tumours weighed two pounds : one a pound and a quarter ; and the other, three-fourths of a pound. But a further detail of the case might be deemed improper, as a full account of the operation and of the subsequent treatment, has been promised by Dr. Atlee for the *American Journal of the Medical Sciences*. I am, respectfully, your's, &c.,

J. M. FOLTZ.

To SAMUEL FORRY, M. D.

*New York Journal of Medical Science.*

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*Liquor of Hydriodate of Arsenic and Mercury, in cutaneous and uterine Affections*, by Isaac E. Taylor, M. D., of New York. This new chemical combination was first recommended to the profession by M. Donovan, in the *Dublin Medical Journal*. Having prescribed this preparation in a number of cases during the previous eighteen months, Dr. Taylor presents a detail of them in the April



number of the American Journal of the Medical Sciences. He is decidedly of opinion that it produces a more marked effect than the various remedies usually resorted to, in those intractable forms of disease, Lupus, Rupia, Psoriasis, Secondary Venereal, &c.

Case I.—*Lupus exedens of the Nose*.—Diretta Dridwhotten, aged 74, born in Germany, and exceedingly fleshy. When first seen, had blackish incrustations around the left ala, and on the septum nasi, a portion of the ala having been removed by ulceration, and causing by its contraction the nose to be drawn to one side. A string of tubercles, the size of buck-shot, extended from the external canthus to the internal, and from the internal up the nose to the forehead. The lower eyelid was everted to its full extent, exposing the conjunctiva palpebralis, and producing an unpleasant deformity to look upon. Several of these tubercles were ulcerated, and had brown crusts upon them. The disease commenced twenty years ago on the left angle of the nose, which was accidentally struck by a whip, and shortly ulcerated. This was after a time healed by a French physician, with an external application; it, however, broke out again, and has since gradually progressed, till it has reached this extent. Her general health good. Various remedies have been tried in her case, but without mitigating it in the least. After the bowels were regulated, and advice given as to her diet, she was placed upon the solution, five drops three times a day, with a table-spoonful of water. She continued taking the 'liquor' till October, when it was applied locally to the part, and after a short time it was perfectly healed, the dark and black incrustations were entirely removed, and a clear shining surface exposed, the unpleasant fœtor and discharge ceased. The tubercles around the lower eye-lid were reduced even with the skin, except a very large one at the external canthus; the lid has recovered nearly its natural position, and the conjunctiva saved from being exposed to the action of the air. After a month it commenced its work again on the nose, but was a second time arrested, and to this date has not returned, but presents a surface healed through its whole extent in the nose. The only tubercle at present remaining is the one at the external canthus of the eye that has a crust upon it.

Passing over the remaining cases detailed by Dr. Taylor, we come to his "Remarks," in which he cautiously and justly observes:

"Whatever doubt may exist as to the exact nature of these cases, the length of time some of them have been affected, and the benefit they have derived from the use of the remedy, must go far to urge its trial in the chronic affections of the skin."

In addition to the evidence here presented in favor of the "*liquor hydriodatis arsenici et hydrargyri*" in certain chronic cutaneous affections, we are enabled to lay before our readers the further experience of Dr. Taylor, as presented in the following communication:

"New York, August 20, 1843.

"MR. EDITOR,—Since the article from which the preceding extracts have been taken was published in the April number of the American Journal of Medical Sciences, several cases of Lupus, with

various other eruptive diseases, have come under my notice. The total number of lupus cases (exedens and non-exedens) which have fallen under my observation during the last fifteen months, has been twenty-two ; eighteen in my own practice, and four in that of other gentlemen. The efficacy of the " liquor " has been more particularly observed in lupus owing to its obstinacy in yielding to any constitutional remedies, and the exceedingly important benefit accruing from its use ; yet of infinite and decided advantage in the more intractable form of the other eruptive diseases. As respects lupus, I would here remark, that there is a feature in its diagnosis which has escaped the attention of all the authors on the subject, which is, its predilection for the left side, whether of the exedens or non-exedens, or vorax form ; whether occurring on the cheek, the arm, or the body, the left side has almost invariably been effected, only two cases out of the twenty-two exhibiting it on the right side. A second feature worthy of note, so far as my experience has gone, is that females are more especially subject to it, not one of the cases I have seen being in a male ; the proportion being much greater than that of Royer's, nor has it obtained, agreeably to Royer, in scrofulous patients, or those predisposed to scrofula ; nor in conformity to the opinion of Plumbe, that the cachectic system was always manifest in the cases he saw ; on the contrary, fully two-thirds the patients under my charge were of healthy appearance and constitution, the secreting functions being free, and the chylopoetic viscera not disturbed, and in several cases it was observed in its incipient state in all its forms ; and as it is seldom that it comes under the eye of the pathologist, at its commencement, it becomes difficult to determine whether it originates in unhealthy inflammation, or always with a tubercular elevation of the cutis ; and, as various opinions prevail on this point, I am induced to join in the opinion of Biett, that tubercles are not the elementary lesions in every case of lupus, but that it is attended from the commencement with simple erythema.

From the number of cases stated, it will be observed that what was considered a rare disease, and of great rebellion, has become more frequent, and not only can be ameliorated in its extensive ravages, but frequently cured for a long time, as some of the cases have been seen, and it had not returned in them. This frequency might very justly give rise to the question whether these were all cases of lupus ? or whether some of them were not tubercular syphilis, a disease they are more nearly allied to than any other, and which in some suspicious cases (where only the tubercles are evolved) it is exceedingly difficult to determine ; but the well-marked characters so frequently noticed in the secondary disease, militate greatly against a mistaken diagnosis.

Respecting the non-exedens form, the treatment with the Donovan's liquor has proved of no benefit, nor has it answered when applied locally, nor has any treatment, whether constitutional or local, been of benefit, but when locally applied had a tendency to aggravate it. In one case, much benefit was derived from acetic acid applied



locally ; still, in others it failed. The smallness of the dose has not been changed, but in one instance, when it was raised to ten drops. Ptyalism has not been observed in any other cases but those reported, when it has been continued for over six months, nor has any affection of the bowels exhibited itself under its use ; and it affords me pleasure to add my further experience respecting its value in the eruptive diseases in all their chronic forms, particularly in that of lupus, so intractable, destructive, and formidable.—ISAAC E. TAYLOR.—*New York Journal of Medicine.*

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*Muriate of Ammonia internally.*—In the medical treatment of pleurisy, and subacute inflammation of the lungs, and congestions of the mucous membrane, I have availed myself very satisfactorily of a German remedy, which is almost universally employed in such cases, viz. the muriate of ammonia.

In English practice it has generally been confined to external use, whereas it is employed by the Germans in a great variety of internal complaints. It usurps the place of the nitrate of potash in British practice. Its employment is confined to sub-acute affections, congestive states of the mucous membrane of the bronchia, and chronic affections of the serous membrane : where the inflammation runs very high, the nitrate of potash and soda are preferred. It has no very decided action on the system, although it sometimes stimulates the kidneys ; but it is considered to be deobstruent, and to unload the vessels gradually, so that convalescence is achieved without any critical evacuation. It relieves thirst, and the tongue gets unloaded under its use. It has certainly a decided action on the mucous membrane generally, and is useful in old coughs accompanied by gastric derangement.

I was loath to employ it when I first commenced practice in St. Petersburg, but the good recommendation of my German colleagues overcame my scruples, and during the last ten years of my sojourn among them, I prescribed it most freely, and have reason to speak most highly of it. I never failed to use it in the many cases which that climate affords of such affections as are benefited by it.

Its combination with the tartrate of antimony, in a solution of extract of liquorice, is a valuable prescription. The following is the form usually employed :

℞ Ammonia Mur. ℥j. ; Ext. Glycyrrhiz. ℥iij. ; Antim. Tartar. gr. ij. ; Aquæ distil. ℥vii. M.

A large table-spoonful of this mixture is administered every two hours. The antimony forms no inconsiderable part in the operation. When its nauseating effects have made sufficient impression upon the disease, it may be withdrawn, and the muriate continued by itself. In many cases the latter is only administered.

Stomach coughs are greatly benefited by it. Where the tongue is loaded, it cleans rapidly under its use. A variety of affections of the mucous membrane, sore throats, enlarged tonsils, relaxation of the uvula, &c. feel its influence.—*Sir G. Lefevre on thermal Comfort.*



*Case of Bicephalous Monstrosity; Removal of one of the Heads by Ligature.*—I was called, on the 31st of October, for the especial purpose of “cutting off a growth from the head of an infant” born the day before. The mother, who had been confined about eighteen hours, was seated at her spinning wheel; the infant was asleep in its cradle. Examined particularly, the head was found small, the forehead flat and ape-like; the face and all other parts of the body natural.

Upon the occiput, and near the posterior fontanelle, there was a large mass, rather larger than the head of the child, appended by means of a pedicle an inch and a half in diameter. This mass exhibited the several features of the face—a cleft for the eye, but without any eye-ball; an elevation in the seat of the nose, and a fold in the place of the mouth. It had no bony cranium, but was composed of a thick scalp, covered with hair, and having a cartilaginous consistence in some places. On the posterior aspect of this cephalic mole there was a spherical mass of a bright red colour, within which distinct fluctuation was apparent. When this red mass was pressed, the infant gave no indications of suffering. When the false head was touched, it cried. When the pedicle was compressed, there were no signs of pain, but symptoms corresponding to those of apoplexia sanguinea were induced, viz. a stasis in the circulation of the part. This led me to believe that the removal of the part with a ligature might with propriety be attempted. I therefore laid open the soft fluctuating part, by an incision two and a half inches long, and gave vent to about five ounces of clear yellowish serum. On separating the edges of the incision with a couple of blunt hooks, I obtained a distinct view into the interior of the supernumerary head: there I saw two normally formed hemispheres, with sharply defined convolutions, parted by a deep sulcus, within which lay a firm falciform process.

I now passed a well-waxed ligature or band around the pedicle, and drew the knot with moderate tightness. The infant gave no indication of suffering; it remained perfectly quiet. The ligature was drawn more firmly, upon which the respiration of the child became quickened and forcible; the pulse more frequent, harder, and smaller; the pupils dilated; and the blood-vessels of the head and face injected. The external jugular vein even became apparent through the layer of fat, of considerable thickness, which covered it. I thought it prudent to take a little blood from this vessel. A third pull upon the band completed the ligature, at which moment a stream of blood burst forth from the puncture of the external jugular vein, and three ounces were allowed to flow. The infant was put to the breast, which it took greedily.

The pseudo-cephalic mass was now of a deep livid colour; and a few minutes after the operation was over, it had become quite cold. Laid open longitudinally through the thick scalp, I came upon a regular dura mater, which, besides the falciform process already mentioned, exhibited an imperfect tentorium cerebelli; beneath this a small, dark red medullary mass presented itself, which, however, had no simiarity in point of structure with the cerebellum; it was without the convolutions and sulci that were apparent on the cerebral lobes; it had no hemispheres, no subdivisions, no crura, no vermiform pro-

cess. There was no trace of a medulla oblongata. On raising the cerebral mass, I could, however, make out a kind of pons Varolii—a smooth medullary mass, by which the hemispheres of the brain were connected. I perceived no other commissure. The crura cerebri, as well as all the other parts at the base of the brain, were entirely wanting. During the course of this examination the infant was never interrupted in its business of sucking. The parts were covered with a piece of linen dipped in spirits, and the child laid in its cradle. I remained an hour in the house, only quitting it at the distance of three hours after the operation, at which time the infant was tranquilly asleep, and breathing quietly: there seemed every prospect of a happy issue to the case. On my returning next day, however, to see my patient, the parents met me at the door, and informed me, with great satisfaction, that God had not persisted in punishing them with the changeling oaf, for it had just died. Death followed 36 hours after the operation.

The parts were examined anew by Dr. Kersten and M. Loesch. The conclusion was, that the case was one of true, though incomplete bicephalus. The encephalon of the normal head was perfect in all its parts. There was no cerebral connexion between it and the pseudo-cephale; but nervous cords and blood-vessels could be traced into the latter, and processes of the dura mater extended into the connecting pedicle.—Dr. Buehring, in *Casper's Wochenschrift*, No. 1, 1844, and *Medical Gazette*.

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*On an Epidemic Pseudo-Syphilis*, by M. Aliès.—The district of R——, near Luxeuil, contains a population of 700 inhabitants. In 1840 and 1841, symptoms very like those of syphilis appeared in about 80 individuals. The principal feature of the malady consisted in an eruption of mucous tubercles in the neighbourhood of the anus and genitals. Common report attributed the origin of the disease to one of the inhabitants who was supposed to have had connexion with infected women, who on his return to the village communicated the disease to his family, whence it spread throughout the whole district. M. Aliès does not pronounce on the true nature of the disease; it is beyond doubt, he says, its appearance and situation closely resembled syphilis, and mercury rapidly cured it, whilst in those patients who would not submit to this plan of treatment the disease lasted a long time. Nevertheless, the order of appearance and succession of the symptoms, their mode of transmission and termination induced him to doubt its being of a syphilitic nature, together with the fact that a great number of his patients denied having been exposed to any source of infection, and in all there was a complete absence of secondary symptoms.—*Journal de Medicine de Lyon and Gazette Medicale*.

[We regret very much that we have only seen a short abstract of this paper, but from what we have been enabled to lay before our readers, they will perceive that there is evidently a close resemblance between it, and the characters of “*Sibbens*,” detailed in another part of this Number.—ED.]

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PART I.  
ORIGINAL COMMUNICATIONS.

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ART. XIII.—*Notes on Ovariotomy.* By FLEETWOOD CHURCHILL, M.D. M.R.I.A.; Hon. Fellow of the Philadelphia Medical Society; Physician to the Western Lying-in Hospital and Dispensary; and Lecturer on Midwifery, &c. at the Richmond School of Medicine.

[Read before the Dublin Obstetrical Society.]

THERE are some diseases so generally fatal in their results, and so little under the control of ordinary treatment, that a practitioner may be fully justified in having recourse to extraordinary expedients, even though attended with serious risk, provided only that the risk from the operation be considerably less than the mortality from the disease under ordinary remedies.

This remark I would apply to the operation for the extirpation of diseased ovary, which has recently attracted so much attention in England; and as the subject is one of so much importance, I make no apology for laying the matter somewhat at length before this Society: for, on the one hand, we find the



disease almost unmanageable by the methods hitherto adopted, and ending fatally sooner or later; and on the other, an operation of the severest kind, and averaging a high rate of mortality, is proposed as a remedy. If experience shall exhibit a fair and reasonable proportion of successful cases, then, although severe, the operation will be justifiable; but if its fatality at all equal that of the disease, it will clearly be altogether objectionable.

But before we enter into the merits of the operation itself, it may not be amiss to notice one or two points in the pathology and history of the disease for which ovariectomy is proposed as a remedy.

*Dropsy of the ovary*, though sufficiently distinctive as a name, yet comprehends considerable differences of morbid structure; for instance:

1. The enlarged ovary may consist of a single cyst, with thin membranous parietes containing a serous fluid.

2. Instead of a single cyst there may be many, each separate from the other, or two or more communicating together. The fluid may vary in quantity, quality, and consistence in each, being in some limpid serum, in others green, yellow, or brown glutinous matter; in others, of the appearance and consistence of honey; and in others, hydatids.

3. In cases of multilocular dropsy of the ovary, we find more or less of solid matter, sometimes chiefly at the root of the tumour, in others forming a large portion of it.

4. Again, we find the ovaries enlarged considerably from fibrous tumours. Dr. Baillie remarks, that "the ovarium is much enlarged in size, and consists of a very solid substance intersected by membranes, which run in various directions. It resembles in its texture the tumours which grow from the outside of the uterus, &c."

5. Lastly, the ovaries may be the seat of malignant depositions, and though, as in the case of fibrous tumours, the enlargement is not so great as in dropsy, yet it sometimes attains a considerable size.

Although we find these diseases attain to a great development without much complaint on the part of the patient, we cannot therefore conclude that they cause no irritation in the neighbouring tissues, for we very commonly find adhesions more or less extensive between the tumour and abdominal peritoneum, or effusion into the serous cavity.

The symptoms to which these enlargements of the ovaries give rise are partly mechanical, partly sympathetic, and partly constitutional. Pressure on the neighbouring organs will be in proportion to the amount of the disease and its situation. Thus the patient may suffer from dysuria, or even retention of urine, from difficulty in evacuating the bowels, and from pain along the sciatic nerves, whilst the tumour is in the pelvis. After it rises above the brim, these symptoms are generally less marked, but certain unpleasant consequences result from pressure upon the intestines and stomach, and, when the enlargement is excessive, from the pushing upward of the diaphragm.

It is not very uncommon for some of the signs of pregnancy to be present, owing to the intimate sympathy of distant organs with the ovaries.

For a considerable time—varying in different patients—there are few constitutional symptoms, the suffering being chiefly local; but after some time, as the disease advances, a great change takes place, in consequence of diseased action going on in the ovary. Dr. Burns observes: “In the course of the disease the patient may have attacks of pain in the belly, with fever, indicating inflammation of part of the tumour, which may terminate in suppuration, and produce hectic fever: or the attack may be more acute, causing vomiting, tenderness of the belly, and high fever, proving fatal in a short time: or there may be severe pain, lasting for a shorter period, with or without temporary exhaustion, and these paroxysms may be frequently repeated. But in many cases these acute symptoms are absent, and little distress is felt until the tumour acquires a size so great as to obstruct respiration, and cause a painful sense of distention. By this time

the constitution becomes broken, and dropsical effusions are produced. Then the abdominal coverings are sometimes so tender that they cannot bear pressure; and the emaciated patient, worn out with restless nights, feverishness, and want of appetite, pain, and dyspnoea, expires.”\*

This disease may terminate in various ways. 1. In some cases by resolution and absorption of the fluid; this, however, is extremely rare, even in early dropsy, and, of course, infinitely more so when the disease has made much progress. 2. Inflammation may attack the covering of the sac, giving rise to adhesions; and in some of these cases the contents of the sac may be evacuated into the intestines or vagina with temporary relief, and in a few cases ending in a perfect cure. 3. The tumour may be attacked by inflammation, ending fatally; this is not uncommon after tapping. 4. The parietes of the ovary may give way, evacuating its contents into the cavity of the peritoneum: or more frequently the walls of some one of the cysts in a multilocular dropsy give way under the general pressure, and open into the abdomen. Peritonitis generally follows, often ending fatally.

Thus in very few cases, indeed, is there hope of cure by absorption; in others there may be spontaneous, though temporary, relief afforded by the evacuation of the fluid through artificial openings; but upon the whole there is little prospect before a patient afflicted with this disease but long continued annoyance, more or less suffering, and sooner or later broken health, a shattered constitution, and death.

In an estimate of unusual modes of relief like the present, it would be very desirable to ascertain not *merely the ordinary results of the disease*, but the *period of time occupied in arriving at them*. But in the present instance this is impossible, as the course of the disease is irregular: in some cases the termination is comparatively early, in others the disease lasts many years.

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\* Midwifery, p. 139.



We therefore lack one element for a complete calculation. The general opinion is uniform as to the results, and the little benefit to be obtained from medicine, except in early cases; so much so, that when the tumour has attained a certain size, the only relief anticipated is from surgical treatment.

So far then our object is clear, having ascertained, as nearly as we can, the consequences of the disease when left to itself, or under medical treatment alone; we shall next review shortly, the different surgical methods which have been proposed, and then, by a fair comparison, estimate the value of each.

It will have been noticed that in the preceding observations I have said nothing upon fibrous growths, or malignant disease of the ovaries, and for the obvious reason, that although such have been extirpated, it is not for them that ovariectomy is proposed, but for ovarian dropsy.

1. The ordinary surgical operation for the relief of ovarian dropsy is abdominal paracentesis, puncturing the tumour by a trocar, and evacuating its contents. No doubt that by this operation the life of the patient is frequently prolonged, and present relief from the over-distention is afforded, but by degrees the sac refills, and all the former inconveniences recur, with no hope of relief, except by a repetition of the operation. Thus, for instance, Portal tapped one patient twenty-eight times; Ford, another forty-nine times, drawing off altogether 2649 pints. Morand evacuated 427 pints in ten months; and Martineau drew off 495 pints within a year; and from the same patient 6631 pints, by eighty operations, in twenty-five years.

But the necessity for a repetition of the operation is neither the only nor the worst inconvenience attendant upon abdominal paracentesis. The sudden evacuation of so large a quantity of fluid may cause alarming or even fatal exhaustion; or if she recover from this, the tumour itself, or the peritoneum, may be attacked by inflammation, with its consequences.

Moreover, if the tumour be multilocular, and the cells do not communicate, or if their contents be not fluid, the operation

will fail altogether. The same result will obtain if the tumour be fibrous or scirrhus: in the latter case, indeed, the fatal result will rather be accelerated.

Mr. Southam has furnished us, in his Essay, with a table, which, so far as it goes, may enable us to form an estimate as to this operation. He has taken ten cases from Dr. Bright, five from Dr. Barlow, and added five of his own.

Patient	Age.	Married.	Single.	Duration of Life after first Operation of Paracentesis.	No. of Times tapped.	Cause of Death.
A. B.	44	1	..	24 hours.	1	Inflammation.
— H.	..	..	..	48 do.	1	Do.
E. S.	36	1	..	Several days—10?	1	Do.
M. H.	40	..	..	Few days—7?	1	Do.
				1 month.	1	Ulceration of sac, and escape of contents into abdomen.
	45?	..	..	1 do.	1	Exhaustion from extensive scirrhus disease.
— B.	..	..	..	1 do.	1	Exhaustion.
	..	1	..	2 months.	2	
E. W.	26	1	..	4 do.	3	Exhaustion.
S. P.	35	1	..	7 do.	1	
M. M.	53	1	..	7 do.	5	Inflammation.
C. E.	40	..	..	8 do.	6	Exhaustion.
— O	54	1	..	8 do.	1	Do.
S. B.	20	..	1	9 do.	4	Inflammation.
E. S.	22	..	1	15 do.	6	
A. M.	34	1	..	18 do.	2	Inflammation.
— T.	33	1	..	4 years.	7	Exhaustion from pressure of tumour.
E. W.	27	..	..	4 years 9 months.	14	Inflammation after tapping.
E. B.	32	..	1	7 years.	4	Do.
M. N.	35	1	..	8½ do.	11	Do.

“Thus, fourteen died within nine months after the first operation, four of whom survived it only a few days. Of the remaining six, two died in eighteen months, and four lived for periods varying from four to nearly nine years. It further appears that paracentesis does not prolong life, on an average, for more than eighteen months and nineteen days, and that one in five dies from the effects of the first operation.”\*

\* Mr. Southam's Remarks, &c., Med. Gaz.

Of eleven cases of dropsy of the ovary admitted into Guy's Hospital, seven were tapped, three of which were unsuccessful.\*

2. From the unsatisfactory results of paracentesis, certain modifications have been proposed; thus it has been suggested, that, after emptying the sac, some stimulating fluid might be injected, as in hydrocele, for the purpose of exciting inflammation which may end in obliteration of the sac. However, after pointing out inflammation of the sac as one cause of a fatal termination, it will scarcely be necessary to do more than refer to it as increasing the risks of tapping.

3. Dr. Blundell has proposed *early* tapping as a practice "which may be thought of" in these cases, on the principle that as in the smaller cysts, the accumulation is less rapid, the patient would be spared suffering. He thinks that a puncture might be made into the tumour whilst in the pelvis, or that an incision being made through the abdominal parietes, the finger might guide the trocar down to the tumour.

We are not aware of any cases thus treated, nor do we anticipate that the results would be more favourable than from tapping in the usual way.

4. An attempt at cure has been made by Ledran, Houston, Voisin, and others, by making a free incision into the ovary, evacuating its contents, and converting the opening into a fistulous sore. Capuron states, that "this method is generally abandoned, because it was remarked that it accelerated the death of the patient;"† and Dr. Burns remarks that in no case has he seen benefit from it.‡

Dr. Blundell proposed a plan something like this, but instead of an incision he suggests the removal of a part of the cyst, "so as to enable it to evacuate its contents into the peritoneal sac."§

\* Guy's Hosp. Rep. 1837-8.

† Midwifery, p. 142.

‡ Mal. des Femmes, p. 187.

§ Diseases of Women, p. 118.



5. Lastly, the extirpation of the diseased ovary has not only been proposed but practised to a considerable extent. As a considerable number of cases are before us, it is not necessary to occupy time in adducing at length the opinions of different writers, further than to observe, that it is said to have been first recommended by Vanderhaar, and afterwards by Delaporte, Morand, and Logger. In more recent times it is advocated by Blundell.

It is opposed by De Haen, Morgagni, Murat, Capuron, Hamilton, &c.

I may add Dr. Hamilton's objections, that they may be tested by the cases adduced; he says: "1. It is extremely difficult to distinguish enlargement of the ovary in its early stages; and it is still more difficult to foretell the progress of such enlargements; any operation might, therefore, be useless or unnecessary, unless if there be no disease, and unnecessary if the disease be in a stationary condition. 2. There is always a risk, in cases of enlarged ovary, that there may be a complication of organic disease or that morbid adhesions may have formed, connecting the disease with other parts. 3. As no prudent practitioner would think of operating unless the patient's health suffered or seemed to suffer from the disease, there must, in every such case, be the hazard of some malignant affection existing, which no operation could remedy."\*

After these preliminary remarks I shall very slightly enumerate the cases in which the operation has been performed, including those where the ovary was removed, those in which, the disease being ovarian, obstacles prevented the completion of the operation, and those in which the operation was needlessly performed, owing to an error of diagnosis. I shall then throw these into the form of separate tables, so as to enable the Society to form a correct judgment of the whole.

1. The ovary was first *removed*, I believe, by L'Aumoniér

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\* Pract. Obs. Part I. p. 120.

of Rouen,\* on certainly very slight grounds. The disease appears to have been an abscess of the ovary (after delivery) communicating with the uterus by means of the Fallopian tube. M. L'Aumoniér opened the abdomen by an incision four inches long, and removed the ovary. The patient recovered.

2. In 1809, Dr. M'Dowal of Kentucky operated upon Mrs. Crawford. The incision was nine inches long, a ligature was tied round the Fallopian tube, the tumour opened and removed, and the patient recovered. The tumour contained gelatinous matter, and the sac weighed seven pounds and a half.

3. He repeated this operation some time afterwards upon a Negro woman, but found the tumour so firmly adherent to the bladder and uterus that he feared to remove it, and therefore merely evacuated the jelly-like fluid and closed the wound. The woman recovered.

4. In 1816 he performed the operation for the third time, and on a Negro woman. The incision extended from two inches above the umbilicus to within one inch of the pubis; the ligature was applied around the Fallopian tube, and the tumour excised. It proved to be a scirrhus ovary. The woman rapidly recovered."†

5 & 6. The American Editor of Good's Study of Medicine refers to two other successful cases by Dr. M'Dowal, but I am not able to give the particulars.‡

7. Moreover in the New York Medical Journal, 1824, Mr. Foltz speaks of a case by Dr. M'Dowal, which proved fatal, and the British and Foreign Review mentions a fatal case also, but whether the same or different I do not know. At least it would appear that Dr. M'Dowal performed the operation six times.

\* Edin. Med. Surg. Jour. Vol. xviii. p. 532.

† Lizar's Observations on the Extraction of diseased Ovaria, pp. 4, 5.

‡ "Dr. M'Dowal has recorded five cases in which this operation was successful. The ovarium has been extirpated also by Dr. D. L. Rogers of New York. The patient recovered, but died with dysentery eighteen months after the operation. Dr. Alban G. Smith has likewise performed the same operation, and with highly beneficial results."—*Note in Amer. Edit. of Good's Study of Medicine*, vol. ii. p. 590.

8. Dr. N. Smith of Connecticut, operated upon Mrs. Newbridge of Norwich, æt. 33 years, July 5, 1821. The tumour had been growing several years, having disappeared three times, probably from bursting. The incision was three inches long, and the fluid having been evacuated, the sac was separated from its adhesions to the peritoneum and drawn through the wound, a ligature was applied and the sac excised. It weighed two or three ounces. The patient recovered rapidly.

9. In 1823, Mr. Lizars of Edinburgh proposed the operation for the relief of what he conceived to be ovarian disease. The patient was æt. 27, and had one child. The incision extended from two inches below the ensiform cartilage to the pubes, but no tumour could be found. The wound was closed, and the patient recovered..

10. In 1825, he repeated this operation in the case of Janet J., æt. 36, unmarried. The tumour had formed no adhesions, and after the ligature had been applied was easily removed. Some hæmorrhage occurred, but she recovered after some time.

11. In 1825, he operated in like manner upon Isabella C., æt. 25. The tumour was adherent, but he succeeded in separating and removing it. It weighed seven pounds. The patient died in two or three days of gangrene of the peritoneum.

12. He operated a fourth time, upon Magdalen B., æt. 34, unmarried. The tumour was found to be solid and supplied with large vessels, and it was decided not to remove it. The wound was closed, and the patient recovered.\*

13. Dr. A. G. Smith of Danville, Kentucky, operated upon a negress, æt. 30, mother of several children. The incision extended from the umbilicus to within an inch of the pubis. Having evacuated the fluid, he drew out the sac, tied its pedicle and removed it. The patient recovered.†

14. Dr. Quittenbaum has published a successful case of extirpation in which the long incision was used.‡

\* Lizar, *ut supra*, p. 9, *et seq.*

† North Amer. Med. Jour. Jan. 1826.

‡ Comment. de Ovarii Hypertrophîâ et Historia extirpationis Ovarii, &c., cum successû factæ.



15. In 1829, Mr. David Rogers of New York, having first tapped his patient, made an incision from two inches below the umbilicus to the pubes, and having carefully separated the adhesions which the tumour had contracted to the peritoneum, he drew out the sac, applied a ligature and removed it. The solid part weighed three pounds and a half. The patient recovered.\*

16. 1826, Dr. Granville opened the abdomen of a patient to the extent of six inches, for the purpose of extirpating an ovarian tumour, but finding it firmly adherent, he decided to leave it, and closed the wound. The patient recovered.†

17. He has published a short account of another case, in which he removed the diseased ovary, but the patient died three days afterwards.‡

18. Previous to 1828 Dr. Dieffenbach operated by the long incision on a patient, æt. 40, but decided not to remove the ovary on account of the supply of large vessels. The patient recovered.§

19. Dr. Chrysmer performed the operation upon a woman, æt. 47, mother of eight children. The incision extended from the xyphoid cartilage to the pubis, and, after evacuating the fluid in the abdominal cavity, the tumour was separated from its adhesions to the stomach and peritoneum, a ligature applied, and removed. It weighed seven pounds and one-third, consisted of cartilaginous and lardaceous matter and green sanies. The patient died in thirty-six hours of gangrene of the intestines.

20. He operated in a similar manner upon a patient æt. 38, mother of five children. The adhesions were cut through, a double ligature applied, and the tumour removed. It weighed eight pounds, and consisted of cells filled with honey-like matter and green sanies. The patient recovered.

21. His third operation was upon a patient labouring under

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\* American Medical Journal, vol. v. p. 549.

† London Medical and Physical Journal, vol. lvi. p. 141.

‡ Med. Gaz., Jan. 13, 1843.

§ Archiv. Gen. de Med., vol. xx. p. 92.

other diseases. There were but slight adhesions. The pedicle was four inches thick, it was tied, and the tumour removed, weighing six pounds and a half. The woman died in thirty-six hours. The peritoneum and intestines were gangrenous; uterus cartilaginous; right ovary enlarged; tubercles in the liver, &c.\*

22. In 1826 Dr. Martini performed the operation upon an unmarried woman, æt. 24. The incision was nine inches long, but the tumour was cartilaginous, and inseparably united to the brim of the pelvis. Dr. Martini contented himself with removing a sacculated portion from the superior part of the tumour, and then closed the wound. The patient died in thirty-six hours, apparently of hæmorrhage.†

23. A case is mentioned in vol. xiv. of Froriep's *Notizen* of this operation, but without the name of the operator. The patient was 48 years old, and had been tapped five times in six months. The tumour had a broad base, and was so firmly attached to the os innominatum that it could not be removed. The patient died on the sixth day afterwards.

24. Dr. Ritter operated upon a woman æt. 31. He first performed paracentesis abdominalis, and a fortnight afterwards removed an enlarged ovary by the long incision. The patient recovered slowly.‡

25. In 1834, Mr. King, of Saxmundham, operated upon Soph. Puttock, æt. 40, but after making an incision seven or eight inches long, no tumour could be found. The patient recovered.

26. In 1836 he operated, by the short incision, upon Hannah Cavell, æt. 37. The tumour, which consisted of a single cyst, with a solid base, was punctured, and twenty-seven pints of fluid evacuated. The sac was then drawn out, and excised below the ligature. The patient recovered.§

\* Archiv. Gen. de Med., vol. xx. p. 94.

† Ibid. p. 96.

‡ Med. Jahrbuch d. kk. Oester. Staates, vol. ii. p. 256. 1832.

§ Lancet, Jan. 21, 1837, p. 586.

27. In 1833 Mr. Jeafferson, of Framlingham, operated upon Mrs. B. The incision was about one inch and a half long, and after evacuating the fluid, the sac was drawn out, and, after a ligature had been applied, removed. The patient recovered.\*

28. In 1836, M. Dolhoff† operated on M. Bock, æt. 23. The fluid was first evacuated by an incision and puncture. The incision being enlarged, more fluid escaped (fifteen pints in all) and the sac was removed. No adhesions. The patient died in two days of peritonitis.

29. He also opened the abdomen in another case, but the tumour was solid, and so fixed in the pelvis that he did not remove it. The patient died in eight hours.

30. He opened the abdomen of a third patient, but found no tumour. The patient recovered.

31. In November, 1836, Mr. West of Tonbridge operated by the short incision (two inches) on Mrs. Harrison, and having punctured the sac, and drawn off twenty pints of fluid, the sac was easily drawn out and excised, after its pedicle had been tied. There were no adhesions. The patient recovered.‡

32. Mr. Gorham§ states, that Mr. West repeated the operation on Miss S. Twenty-four pints of fluid were evacuated, and the sac extracted. The patient recovered.

33. And on A. M., æt. 24. Her constitution was much shattered previously, and she sank.

34. In another case Mr. West performed the operation; the patient recovered, but was not cured of the disease, as she had to be tapped afterwards.

35. Mr. Gorham also gives a case by Mr. Hargraves. The patient was æt. 40; adhesions had formed, and the cyst was multilocular. The patient recovered, but was not cured.||

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\* Trans. of Prov. Med. Association, vol. v. p. 245.

† Rust's Magazin, 1838, vol. li. p. 82.

‡ Lancet, Nov. 25, 1837, p. 307. § Ibid. Oct. 14, 1839. || Ibid.



36. In 1840 Mr. B. Phillips operated by the short incision, and the patient died.\*

37. In 1841 Dr. Stilling performed the operation upon a patient æt. 22. The incision was six inches long. The patient died of hæmorrhage.†

We now come to Dr. Clay's cases, which have excited so much attention in England.

38. In Sept. 1842, Dr. Clay operated upon Mrs. Wheeler, æt. 46. The incision was twenty-seven inches long; the tumour, partly solid, and partly fluid, weighed twenty-eight pounds, was removed, and the patient recovered.

39. Oct. 7, 1842. Mrs. Berwick, æt. 57. Incision fourteen inches. Extensive adhesions. Tumour excised, weighed twenty-four pounds. The patient recovered.

40. Nov. 8, 1842. Mrs. Edge, æt. 39. Incision twenty-eight inches. Very extensive adhesions. Tumour removed, weighed seventy-three pounds. Patient recovered.

41. Oct. 26, 1847. Mrs. Dillon, æt. 47. Incision sixteen inches. The tumour is described as "anomalous," and with extensive adhesions. It was not removed. She died on the seventh day, of inflammation.

42. Nov. 17, 1843. Mrs. Hardie, æt. 45. Incision fourteen inches. The tumour was a fleshy tubercle of the uterus, and the entire, except the cervix uteri, was removed. The patient died immediately from hæmorrhage.

43. Mrs. Lythgow, æt. 40. Incision fourteen inches. Ovarian tumour, weighed twenty-six pounds; very extensive adhesions. She died in thirty-six hours from hæmorrhage.

44. Aug. 21, 1843. Miss Hayne, æt. 22. Incision fourteen inches. Tumour was adherent, and weighed twenty-six pounds. She recovered.

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\* Medical Gazette, vol. i. 1840.

† Brit. and For. Rev. Extracted from Holscher's *Hanoversche Annalen*, Hft. 3, 1841.

45. Aug. 30, 1843. Mrs. Elliott, æt. 40. Incision fourteen inches. No adhesions. She died thirty-six hours after excision, of inflammation.

46. Oct. 2, 1843. Miss Jackson, æt. 43. Incision fourteen inches. Extensive adhesions. Tumour removed, weighing thirty-one pounds. She recovered.

47. Oct. 3, 1843. Mrs. Jones, æt. 59. Incision sixteen inches. Very extensive adhesions. Tumour removed, weighing fifty-four pounds. The patient died of exhaustion thirty-two hours afterwards.

48. Oct. 4, 1843. Mrs. Brocklehurst, æt. 45. Incision fourteen inches. The tumour was an hydatid, weighing sixteen pounds, and was excised. She recovered.

49. Oct. 9, 1843. Mrs. Tweedale, æt. 58. Incision eight inches. This was a case of pelvic tumour, but of what nature I am not aware. It was removed, and weighed twenty-four pounds. Dr. Clay says the patient recovered from the operation, but died on the tenth day.

50. Nov. 16, 1843. Mrs. Priest. Incision sixteen inches. An ovarian tumour, having very extensive adhesions, and weighing twenty-six pounds, was removed. The patient recovered.\*

51. Jan. 6, 1844. Patient, æt. 49. She had ten children. After the abdomen was laid open by the long incision, the disease was found to be uterine. A ligature having been applied around the cervix, the uterus and ovaries were removed without hæmorrhage. The patient died after three weeks.

52. In 1843 Mr. Morris performed the major operation successfully.†

53. In 1842 Mr. Walne operated by the long incision upon Mrs. F., æt. 58, mother of five children. The tumour was free from adhesion, and after the application of the ligature, was re-

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\* I am indebted to the politeness of Dr. Clay for this corrected list of all the operations he has performed. Only part of them have been published in the Medical Times.

† Manchester Courier.

moved. It consisted of many cysts and solid basis. The patient recovered.\*

54. He operated again in 1843 upon Mrs. R., æt. 57, after applying a double ligature round the tumour, which weighed sixteen pounds three quarters. The patient recovered.

55. In the same year he operated upon Miss A. K., æt. 20. The broad ligament constituted the pedicle, and a ligature having been applied, it was divided. The tumour weighed twenty-eight pounds. The patient recovered.

In none of these cases were there any adhesions between the tumour and surrounding parts.†

56. Oct. 11, 1843, he operated upon Mrs. P., æt. 54, and after making an incision five inches long, he found such extensive adhesions that he desisted, and closed the wound. The patient recovered.

57. In another case he removed a diseased ovarium with a fatal result.‡

58. In 1843 Mr. Southam operated upon Mrs. H. by the long incision. The tumour, before the operation, was perfectly moveable, and proved to be cystic sarcoma, weighing four pounds twelve ounces. The ligature was applied, and the diseased ovary removed. The patient recovered.§

The account given by Mr. Southam is remarkably interesting, and speaks well for the practical sagacity of that surgeon. I have been much indebted to his extensive researches in the collection of these cases.

59. In June, 1843, Dr. F. Bird of London performed the operation. The incision was three or four inches long. The sac was punctured, and then drawn out and excised, after the application of a ligature. The patient recovered.||

60. He has repeated the operation since with success. The tumour consisted of cysts and solid matter, and weighed twenty-seven pounds.¶

\* Medical Gazette.

† Ibid.

‡ Med. Gazette, Feb. 23, 1844, p. 686.

§ Med. Gazette. 1843.

|| Med. Gazette, Aug. 18, 1843.

¶ Ibid. Dec. 29, 1843, p. 409.



61. In the last *Medico-Chirurgical Review*\* is a case copied from the *New York Journal*, in which the operation was performed by Dr. Atlee of Lancaster, U. S., in June, 1843. The patient had been tapped for ascites three times, and only after the third time was the tumour detected. The operation consisted in an incision nine inches long, which exposed two ovarian tumours, with adhesions. The latter were separated, the pedicles tied, and both ovaria removed. The patient recovered well.

62. In a recent Number of the *Medical Gazette*† is an account of an operation, by Mr. Heath of Manchester, for the removal of supposed ovarian tumour, but upon making the long incision it was discovered that the tumour was uterine. The operator determined to remove the uterus, tumour and all. The patient died of hæmorrhage in seventeen hours. The symptoms were those of a uterine, and not ovarian tumour, and allowing that such a mistake might be made without blame, it would have been far better not to have meddled with a disease which seldom, if ever, compromises life, and hardly interferes with comfort.

The last Number of the *British and Foreign Medical Review*‡ notices some additional cases.

63. The first was by Mr. Lane, who tapped the patient ten days before the operation, and extracted the ovary through an incision, reaching from the umbilicus to the pubis. The patient has so far recovered.

64. Mr. Key also performed the operation in Guy's Hospital, July 29, 1843. Patient aged 19, unmarried. Incision four inches at first. No adhesions. Incision enlarged up to near ensiform cartilage. Pedicle small. Ligature applied, and tumour removed. Tumour multilocular cysts, with large vessels. Patient died Aug. 6, of peritonitis.§

65. Mr. Greenhow, of Newcastle, operated Sept. 3, 1843. Patient aged 29, married. For four years she suffered from fre-

\* Jan. 1844, p. 258.

† Dec. 8, 1843.

‡ Jan. 1844, p. 237.

§ *Guy's Hos. Rep.*, Oct. 1843, p. 473.

quent uterine hæmorrhage. Long incision. Several adhesions; ligature applied, and tumour excised. Patient died on seventh day, of peritonitis.\*

66. Mr. B. Cooper operated. Patient aged 32, married, but had no children. Long incision. Some adhesions. Double ligature, and excision. Patient died of peritonitis the seventh day,† in consequence apparently of a portion of omentum being included in the ligature.

TABLE I.—*Cases of Extirpation of the Ovary.*

No. and Date.	Operator.	Age	Incision.	Result.	Character of Disease.	Adhesions.
1	L'Aumonier.	..	4 inches.	Recovered.	Abscess of ovary.	
2—1809	Dr. M'Dowal.	..	9 do.	do.	Gelatinous matter.	
3—1816	do.	..	Long.	do.	Scirrhus ovary.	
4	do.	..	..	do.		
5	do.	..	..	do.		
6	do.	..	..	Died.		
7—1821	Dr. N. Smith.	33	3 inches.	Recovered.	Cyst, fluid.	Adhesions.
8—1825	Mr. Lizars.	36	Long.	do.		
9—1825	do.	35	do.	Died.		Adherent.
10	Dr. A. G. Smith.	30	do.	Recovered.	Cyst, fluid.	
11	Dr. Quittenbaum.	..	About 4 in.	do.		
12—1829	Mr. D. Rogers.	..	About 3 in.	do.	Solid and fluid.	Adhesions.
13	Dr. Granville.	..	..	Died.		
14	Dr. Chrysmar.	47	Long.	do.	Cart. and lardaceous matter.	Adherent.
15	do.	38	do.	Recovered.	Honey-like and green sanies.	do.
16	do.	..	do.	Died.		
17	Dr. Ritter.	31	do.	Recovered.	Cyst, fluid.	
18—1836	Mr. King.	57	Short.	do.	do.	
19—1833	Mr. Jeafferson.	..	do.	do.	do.	
20	M. Dolhoff.	23	Long.	Died.	Cyst and fluid.	Adhesions.
21—1836	Mr. West.	..	Short.	Recovered.	do.	
22	do.	..	do.	do.	do.	
23	do.	24	do.	Died.	do.	
24	do.	..	do.	Not cured.	do.	
25	Mr. Hargraves.	40	do.	do.	Multiloc. cysts.	Adhesions.
26	Dr. Clay.	46	27 inches.	Recovered.	Cysts, sol. and fluid.	do.
27	..	67	14 do.	do.	do.	Ext. adh.
28	..	39	28 do.	do.	do.	do.
29	..	40	14 do.	Died.	do.	do.
30	..	22	14 do.	Recovered.	do.	Adhesions.
31	..	40	14 do.	Died.	do.	None.
32	..	43	14 do.	Recovered.	do.	Ext. adh.
33	..	59	16 do.	Died.	do.	do.
34	..	46	16 do.	Recovered.	do.	do.
35—1840	Mr. B. Philips.	..	2 inches.	Died.		
36—1841	Dr. Stilling.	..	6 do.	do.		
37—1842	Mr. Walne.	58	Long.	Recovered.	do.	None.
38—1843	do.	57	do.	do.	do.	do.
39	do.	21	do.	Died.		
40—1843	do.	20	do.	Recovered.	do.	do.
41—1843	Mr. Morris.	..	do.	do.		
42—1843	Mr. Southam.	..	do.	do.	Cystic sarcoma.	do.
43—1843	Dr. F. Bird.	..	3 or 4 in.	do.	Cyst and fluid.	do.
44—1844	do.	..	do.	do.	Cysts and solid matter.	do.
45	Mr. Atlee.	..	9 inches.	do.	..	Adhesions.
46	Mr. Lane.	..	Long.	do.	Cysts fluid.	None.
47	Mr. Key.	19	do.	Died.	do.	do.
48	Mr. Greenhow.	29	do.	do.	..	do.
49	Mr. B. Cooper.	32	do.	do.		

\* Med. Trans., Jan. 20, 1844, p. 240.

† Ibid. p. 241.

TABLE II.—*Cases of ovarian Disease in which the Operation could not be completed.*

Date.	Operator.	Cause of Failure.	Result.	Incision.
50	Dr. M'Dowal.	Adhesions to bladder and uterus.	Recovered.	Long.
51	Mr. Lizars.	Solid and very vascular tumour.	do.	do.
52—1826	Dr. Granville.	Firm adhesions.	do.	6 inches.
53	Dr. Dieffenbach.	Vascularity.	do.	Long.
54—1826	Dr. Martini.	Solid and fixed tumour.	Died.	do.
55	Anonymous.	Fixed tumour.	do.	
56	M. Dolhoff.	do.	do.	About 6 in.
57	Dr. Clay.	Exten. adhesions.	do.	Long.
58	Mr. Walne.	do.	Recovered.	5 inches.

TABLE III.—*Cases in which the Operation failed from an Error in Diagnosis.*

Date.	Operator.	Result.	Disease.
59—1823	Mr. Lizars.	Recovered.	No tumour found.
60—1834	Mr. King.	do.	do.
61	M. Dolhoff.	do.	do.
62	Dr. Clay.	Died.	Uterine tumour.
63	do.	Recovered.	Hydatid.
64	do.	Died.	Pelvic tumour.
65	do.	do.	Uterine tumour.
66	Mr. Heath.	do.	do.

Let us now attempt a little closer analysis of these cases. It will be remembered that the question at present is not whether each operation was justifiable or suitable, but merely as to the results of the operation under given circumstances.

1. The entire number of cases—whether dropsy, or scirrhus of the ovary, uterine disease, or simulated tumours—amount to sixty-six: of these forty-two recovered, and twenty-four died, or about 1 in  $2\frac{3}{4}$ .

Of the forty-nine cases (Table I.) in which the ovary was extirpated, sixteen died, or 1 in  $3\frac{1}{6}$ . Of the nine cases (Table



II.) in which the operation could not be completed, four died, or 1 in  $2\frac{1}{4}$ ; and of the eight cases (Table III.), where the operation was unnecessary, four died, or 1 in 2.

2. It is not quite so easy to give the comparative mortality of the long and short incision, because the definition of each is scarcely settled. Taking the length of the wound as our guide, without reference to the tapping of the tumour before extraction, we will include all cases under the term "minor operation," where the incision did not exceed four inches; and under the term "major operation," where it exceeded that.

Of the true ovarian cases in Table I. there are fourteen cases of the short operation, of these thirteen recovered, and two died; and thirty-four cases of the long operation, of whom twenty-one recovered, and thirteen died, or 1 in  $2\frac{8}{13}$ . In the second and third Table there are fifteen cases of the long operation, of whom seven died, or 1 in  $2\frac{1}{7}$ . Of the forty-nine cases of the long operation twenty died, or 1 in  $2\frac{1}{2}$ . At the same time it must be observed that in the cases of the short operation there are much less irritation and injury owing to the absence of adhesions; and in some cases the short operation would have been perfectly useless, so that if any attempt were to be made, it must be by the long incision, with all its risks. The comparison therefore is not quite fair.

3. Age does not appear to have had much influence upon recovery or death, for the ages mentioned in six of the fatal ovarian cases were 23, 25, 40, 40, 47, and 59; whilst those of the successful ones range between 20 and 60.

The same may be said, as far as the information extends, of the married or single condition of the patients.

4. At first sight one would expect a considerable variation in the result of cases in which there were adhesions from those in which there were none, because of the violence necessary; and this seems to be confirmed by the cases of Chrysmar and others, where the patients died of gangrene of the peritoneum; yet of seventeen cases in which the adhesions were found, and in some very extensive, eleven recovered, and six died. This,

however, shews the great disadvantage of adhesions, and there are certain cases, one of which we have just seen, in which these were so extensive that removal of the tumour would have been impossible.

5. Certain of the operations (Chrysmer, Clay, &c.) were performed upon women labouring under other organic diseases, or suffering from great constitutional exhaustion, and these cases proved fatal.

6. The operation was several times frustrated by the excessive vascularity of the tumour, or its firm attachment to the pelvis, and though several of them (four out of eight) recovered, yet these are additional reasons for serious investigation.

7. It is further shown by Table III. that the operation was performed when no tumour at all existed—when the tumour was uterine, or growing from the pelvis, or an hydatid. At first sight it might be supposed that such errors of diagnosis were the result of carelessness, and that the first could scarcely occur. And yet Mr. Lizars is a surgeon of no mean experience; and M. Dolhoff had his patient in hospital under his observation for a year or so. Very lately I was consulted for a supposed ovarian tumour, and upon examination there was a distinctly shaped abdominal tumefaction, which had all the feel of a uterine or ovarian tumour, and yet upon calling off the patient's attention, and setting the abdominal muscles into action, it entirely vanished.

It may be worth while now to look a little closer at the *diagnosis* of these tumours.

1. The abdominal muscles appear to acquire the power of involuntarily assuming the form and appearance, and of communicating the sensation of a tumour. In some cases it seems as though the result of the form given to them by a former pregnancy. Against this deception we can in a great measure guard ourselves, by prolonging our abdominal manipulation, and calling the muscles into action by leading the patient to converse. Percussion will also aid us in coming to a right conclusion, and

if we make an examination per vaginam and per rectum, there will be but little doubt remaining. And I would observe that an examination per rectum is most valuable in all cases of real or supposed ovarian disease.

2. In the majority of cases the continuity of the tumour, ascertained by the perception with a finger on the os uteri of a shock impressed upon the abdomen, is nearly decisive of a tumour being uterine, and the very feeble or absent impression of such shock, of its being ovarian. The exceptions are mainly those cases where adhesions have taken place, uniting the pelvic viscera closely together. Dr. Simpson of Edinburgh has recently proposed the use of a bougie for this purpose. It is to be introduced into the uterus, and then, he states, that by turning it one way, and pressing the tumour the other, it is quite possible to establish a distinction between the uterus and ovary in cases of ovarian disease. Or it might be possible that the direction taken by the bougie would establish the same fact.

Again, a careful examination per rectum and per vaginam will very often, even where the tumour is adherent, prove that there are two tumours, and their different density, or the comparative vividness of shocks communicated from the abdominal tumour, may justify the inference that one is the uterus and the other the ovary.

Lastly, the history of the disease may throw some light upon its nature. Uterine tumours are *generally* of slower growth, of smaller size, more dense to the touch, seldom attacked by inflammation, and rarely painful; and although none of these circumstances are conclusive alone, they may be very decisive in conjunction with other signs.

3. It may not be very difficult to come to a conclusion as to the existence of adhesions, though far from easy to estimate their extent. The mobility of the tumour, if it do not fill the entire abdomen, will generally decide the question; but when the disease attains an enormous volume, we can do little more than form a conjecture. There is a sort of rolling feel when a



tolerably free ovarian tumour is moved, and a crepitus when adhesion has occurred, which is not easily mistaken; and a change of posture may afford additional information.

4. It is, of course, almost impossible to estimate the vascularity of an abdominal tumour. Occasionally we may distinguish with the finger the pulsation of an artery, and more than once I have ascertained the fact with the stethoscope. A careful examination should always be made with this instrument.

These hints may show at least the obscurity of the means of diagnosis, and perhaps aid a little in dispelling some of that obscurity. At all events it is certain that difficulty and doubt exist, or such mistakes would not have happened in the hands of careful men; and as these errors may be repeated, I would earnestly advise that when, on opening the abdomen, the tumour is found to be uterine, no attempt be made to remove it. The patient has a far better chance of recovery if the disease be untouched, and it is unlikely that any evil consequences will result from the tumour itself. It is a sad reproach that a patient should die, not of the operation, but in consequence of attempting that which was not originally contemplated.

*Conclusions.*—Even after the details I have given, it is very difficult to come to a definite and perfectly satisfactory conclusion, because, 1. we have not sufficiently accurate data to estimate the progress of the disease unaided by surgery. 2. The table quoted from Mr. Southam is clearly too limited to afford a fair average of the results of tapping, and it is not easy to obtain sufficient facts to enlarge it. 3. The cases in which ovariectomy has been performed are of such a mixed character, that it is impossible to select with fairness those cases in which the operation was demanded for the relief of urgent suffering, and suitable to the nature of the disease, without the appearance of partiality. And 4, from the obscurity of the diagnosis, it is too much, perhaps, to expect that our practice in future will be free from those drawbacks on the operation.

But bearing in mind these difficulties, and making allowance

for those drawbacks, I think we may conclude that there are cases in which the operation would be justifiable; and on these grounds,—we find the general opinion is against the curability of the disease by medical means;—that after a time the patient will die from local disease or accident, or constitutional disturbance, and that meantime she suffers more or less inconvenience;—that tapping in almost all cases affords but temporary relief;—and that, as far as the limited statistics we have adduced are admissible as evidence, it is attended with great danger: i. e. 1 in 5 died of the first operation, and of twenty patients, fourteen (more than two-thirds) died within nine months of the first tapping; whilst of the entire number of those who underwent the operation of ovariectomy, about one-half have absolutely recovered so far.

We may add, that of those who died, some were in an unfavourable condition for any great operation, and many had no other hope of relief.

2. If we reject those cases in which the operation could not be completed—those in which it was unnecessary, and those when the patient laboured under organic disease, or a debilitated and broken constitution, the mortality is twelve in forty-two, or 1 in  $3\frac{1}{2}$ . Even making allowance for the difficulty of diagnosis, it does appear to us that in future sufficient judgment may be exercised to reduce the proportion to something near this.

3. Again, if the operation were confined to cases of unilocular cysts without adhesions, or even to cases requiring the major operation where no adhesions exist, the results, according to our statistics, would be more favourable. At present it would seem desirable, if possible, to limit the operation to these cases.

4. Let it be observed, that so far we have canvassed the merits of the operation *on the recorded results*, not on the propriety or impropriety of it in any or all of the cases related; but it would be impossible to shut our eyes to the fact, that it has been sometimes performed without a due regard to the condition

of the patient—to the necessity of an operation at all—or to the one in question being exactly adapted for the purpose.

To justify the operation in an individual case, the patient should be so far inconvenienced by the disease as to require surgical relief of some kind; and yet, on the other hand, she ought not to be in a condition which would prohibit other great surgical operations. In such cases the alternative is tapping or extirpation, and our judgment should be formed upon a careful estimate of the results of each.

Again, it is clear that no operation of this magnitude should be attempted when there is coincident organic disease of a serious character in other organs; nor have we sufficient evidence to justify an extension of the operation to other diseases than those of the ovaries.

5. As to the mode of operating, it appears to me, that it is better to commence with the small incision, and, if necessary, afterwards enlarge it. The great advantage of this plan appears to be, that after making the incision (in some sort an exploratory one), if the sac, after being emptied, can be drawn out, we escape with the slighter risk; if there be obstacles, owing to solid matter, it can be enlarged without difficulty; and if these obstacles be such as to deter us from completing the operation, we can recede with much less danger to the patient; and this I think of vast importance, considering the present uncertainty of our diagnosis.

I have thus endeavoured to lay before the Society such information as I have been able to obtain concerning this important operation, without appearing as its advocate or its opponent, beyond what the statistical results will justify. These results are, I think, neither so favourable as some of its friends have represented, nor so discouraging as its opponents have asserted.



ART. XIV.—*Observations on the radical Cure of Hydrocele.*

By WILLIAM HENRY PORTER, M.D., one of the Surgeons of the Meath Hospital and County of Dublin Infirmary; and Professor of the Theory and Practice of Surgery in the Royal College of Surgeons in Ireland.

It may be almost universally observed, that where a number of methods are proposed by which to attain any given object in surgery, or a variety of operations performed for the cure of any one disease, either that disease presents itself under such different conditions and circumstances, as almost to resolve it into separate species, or else the curative measures are inadequate and imperfect. Thus it is with the disease under consideration: few have had a greater variety of operations performed for its relief or cure—few seem to have attracted a greater share of professional attention, and there are few on which general opinion is more divided with respect to a safe and effectual mode of treatment than hydrocele of the tunica vaginalis. Yet is it in general a simple disease, its pathology well understood, and the rationale of its cure easy of comprehension; the difficulty of the treatment not consisting so much in the removal of the disease, as in doing so without the infliction of much suffering, and without a risk of failure or relapse. Again, the nature of the affection and the situation it occupies are calculated to impart to it a considerable degree of interest: the pardonable apprehension experienced by every person at the existence of any derangement in this important locality, particularly of one, the nature of which he may not understand, together with the actual inconvenience such tumour may occasion, will render any patient anxious as to the result, as well as most desirous of relief. Such relief, to a partial extent, can always be afforded by puncturing the tumour, or, as it is termed, by the palliative mode of treatment; but it is but too well known by experience that the part enlarges again with a greater or less degree of rapidity, the inconvenience is renewed if not increased, until, wearied and ha-

rassed by a constantly recurring annoyance, the patient at length becomes dissatisfied, and insists that something may be done to free him from it for ever. In the humbler walks of life, and amongst persons obliged to earn a livelihood by active exertion, there are other and better reasons for seeking a radical cure, an object for the accomplishment of which numerous operations have been (as I have said) devised, each in its own time advocated and extolled, but each, nevertheless, either so unsuccessful, or attended by such countervailing disadvantages, that many surgeons, whose opinions are entitled to the highest respect, would willingly dissuade their patients from the attempt, and advise them to rest contented with the occasional relief afforded by the palliative method. Still, for the reasons I have mentioned, the radical cure of hydrocele may not, and perhaps ought not, to be abandoned, and therefore it becomes an important subject of inquiry if by any means, either the adoption of a new operation, or a modification of one of the old, an equal degree of success can be obtained with less suffering or danger to the patient.

I am not now disposed to enter upon an analysis of the different operations by incision, excision, seton, caustic, and injection, or of the various circumstances that might possibly render one of these preferable to another; neither shall I discuss the various conditions of the parts that might justly cause any attempt at a radical cure to be regarded as injudicious or inadvisable. Such considerations, however essential to a general understanding of the subject, would be out of place here, where I am about to refer to one operation alone. I wish, then, to be understood as speaking of cases in which there exists no positive objection to the radical treatment—in which the testicle is sound—the tunica vaginalis unaltered—the patient's general health unimpaired—and the circumstances generally favourable to the attempt, and as wishing to point attention to an operation which I believe to be simple, easy of performance, unattended

by many of the disadvantages incident to others, and equally effectual in accomplishing the desired result.

The predilection of the Profession at present seems greatly to incline to the operation by injection, and considered only with reference to a cure, it is sufficiently successful, so that we might rest on it without seeking farther improvement, if it was not that in its performance, and the subsequent progress of the case, it is occasionally open to some objections. In the hands of careless, ignorant, or inexperienced practitioners, the cellular tissue of the scrotum may be injected with the fluid instead of the tunica vaginalis, and a distressing and dangerous inflammation may thence ensue; nor is it unfair to argue against an operation from an error in its performance, when the object is to substitute another that is not liable to any similar casualty. But even when performed in the most judicious manner it may be, and too frequently is, followed by unpleasant consequences, such as inflammation and suppuration of the sac, the formation of sinuses, protracted discharges, and the different forms of constitutional derangement that will be likely to attend such local affections. It is true I have not seen these symptoms actually lead to a fatal termination, although such cases have been familiarly spoken of, and in bad and broken and irritable constitutions, the occurrence would be far from impossible; but I have seen inflammation and fever reach such a height as to occasion no inconsiderable alarm both to patient and practitioner. It was the observation of some such cases that first gave me a distaste for the practice in which I had been educated, and induced me to abandon the operation which I had frequently performed myself. An operation, I conceive, may be very objectionable without being actually fatal, and if any one is liable, even occasionally, to be followed by a painful, tedious, and wearisome confinement, it ought to form a good reason for hesitating to adopt it, and for seeking some other that may promise a greater immunity from similar inconvenience or suffering.

With reference to clinical surgery, this operation is open to



the objection of not being based on any fixed principle, and consequently being more or less empirical. Surgeons are not agreed as to the exact material that ought to constitute the injection, or even as to the requisite degrees of its strength or temperature: every one has his own particular favourite opinion in these respects, and in any two hospitals scarcely will a pupil be able to meet with two cases treated in a precisely similar manner. Thus I have seen one practitioner use a fluid of so high temperature as to be unpleasant to the hand, whilst another has preferred cold water. The contents of the hydrocele itself—solutions of different salts in various degrees of strength and concentration—wine diluted with water in different proportions—brandy and water in like manner—and solutions of iodine, have been all employed, the latter of which at present seems to be highly extolled, and all have been followed by a cure, although, doubtless, in some instances a heavy penalty has been exacted for it. Again, surgeons are as little prepared to say what the effect may be, or to explain the pathology of the cure, supposing it to have been accomplished. In many cases there can be no doubt that the cavity is obliterated by the universal adhesion of the tunica vaginalis scroti to that of the testis, our pathological museums furnishing abundant evidence of this fact. In other instances these adhesions are partial and in spots, and then the cure is generally incomplete. Again, we know that the cavity sometimes suppurates, giving rise to painful and protracted discharges, and frequently to the formation of sinuous ulcerations; the cure, under such circumstances, being always dearly purchased. Perhaps the most favourable termination is where the cavity remains still free, and without any attachment at all, as if merely some alteration had been wrought in the diseased function of the membrane, but then there is a liability to relapse at a future period, for I have seen a hydrocele produced by a blow in a tunica vaginalis, that had been to all appearance successfully treated by injection two years previously. But it may be said that a minute examination of each case might easily

explain many of these discrepancies, both as to symptom and result, and doubtless it is not difficult to conceive that a very irritating form of injection, or a great susceptibility of inflammation in the patient should lead to consequences that would not be expected under more favourable circumstances. Yet this is not the point. What is complained of is, that after an experience of so many years, and in the present advanced state of surgical science, it has not been satisfactorily determined what is the least objectionable form of injection; and again, that with any form hitherto employed there is no certainty of a definite result: each may fail altogether, or, on the other hand, may lead to results that would be infinitely more disastrous.

I have operated frequently for the cure of hydrocele by injection, and, I suppose, with as much success as others have experienced, but I never could consider it a safe or satisfactory operation, or propose it to a patient with the same confidence which I have felt in other cases. I have known it to be *almost* abandoned in the private practice of some eminent surgeons, who never advised it, and performed it, when obliged so to do, with evident reluctance. Even authors who have advocated it most strongly admit such a number of exceptions to the general rule, as to show that they could not have viewed it otherwise than in a dubious light. Thus Dupuytren, who says that the operation by injection is one of the best, the most prompt and most simple for the cure of hydrocele, yet enumerates a vast number of complications that would render it improper, and then states that when there exists the least doubt, the least uncertainty on the nature of the disease, some other ought to be selected. In such he generally recommends the operation by incision. Boyer, who says that it is the only operation at present performed in France, in England, and in the south of Germany, acknowledges that it is so often unsuccessful as to have furnished its opponents ground for their strongest objections. In the edition of Sabatier, edited by Dupuytren, I find it laid down, that of all the methods hitherto devised for the radical

cure of hydrocele, that by injections is the only one now in general use, yet the two objections of its going too far, or not far enough, are fairly and candidly stated. “*Mes journaux me rappellent plusieurs cas ou il n’a eu aucun succes,*” is the acknowledgment of one of these facts, and the other is put with sufficient strength in the following sentence: “*Il en survient quelquefois de beaucoup plus graves, et qui dependent de l’inflammation excessive du testicule et de ses enveloppes: je n’ai pas vu qu’il en soit resulté rien de tres fâcheux, mais les malades ont beaucoup souffert, et ils ont été extrêmement long temps a guérir.*” Under these circumstances I was induced to make trial of other operations, and, after the experience of several years, have adopted that one which I am about to describe, which, if not altogether free from the objection of a possible relapse, or return of the disease, is not so liable to be followed by the severe and violent inflammations that render the operation by injection so perilous.

This operation is partly that by incision, the only difference being, that instead of dividing the tunica vaginalis in the entire extent of the tumour, my incision extends only from an inch to an inch and half in length: and partly that by the tent, an operation first proposed (it is said) by Franco, but revived and recommended by the celebrated Larrey. Having first punctured the tumour in order to examine the state of the parts, and satisfy myself that it is a case in which an attempt to cure the disease radically may be safely made, or at least in which such attempt would be justifiable, I allow the sac to fill again. When the disease has reappeared, and the tunica vaginalis is as much distended as it previously had been, I perform the operation thus: Having that part of the scrotum in which I intend to operate shaved, I make the incision of the length above mentioned, down to the tunica vaginalis, and examine carefully whether any vessel has been wounded that could possibly furnish a considerable quantity of blood. I then pass a bistoury into the tunica vaginalis at one extremity of the incision, out at the other, and



divide it by a rapid withdrawal of the instrument. Having completed the incision, a tent of rolled lint, moistened with oil, and secured with a ligature, so as to be easily withdrawn, is introduced. The operation is then completed. The patient may be placed in bed. On the succeeding day I generally bleed from the arm to the extent of ten, twelve, or fourteen ounces, and particularly if the scrotum is red, and shows a tendency to inflammation. Latterly I have adopted this practice as a preventive in all cases with apparently the most satisfactory results. The tent is left to become loose, and drop out of itself, which usually takes place on the third or fourth day, and need not be replaced; but it is desirable to break up any adhesions that may be formed between the lips of the wound, and to introduce the finger occasionally into the cavity of the tunica vaginalis until the sixth, after which it may be treated with light superficial dressing, and the cure is generally perfect in about three weeks.

I have now practised this operation for fifteen years, and, comparing it with others, have not much reason to feel dissatisfied. At first I was in the habit of plunging the bistoury at once into the tumour, and completing the incision to the requisite extent, by making it cut its way outwards rapidly and at once. This gave an appearance of great simplicity to the operation, but in some instances caused the fluid to become extensively infiltrated in the cellular tissue, which looks unseemly, although really of no consequence, as it is absorbed in a few hours: but the following circumstance induced me to abandon that, and adopt my present mode of proceeding. In July, 1837, I operated on a gentleman above 60 years of age, and in doing so opened a tolerably-sized vessel in the scrotum, and dressed the patient without being aware of the circumstance; the contraction of the parts, and the introduction of the tent, probably preventing the flow of blood: hæmorrhage took place, however, into the sac, and on visiting him in a few hours I found the tumour as large as it had been before the operation, of a dark, red

colour, very painful, and with a coagulum protruding through the wound. I was obliged to incise the tumour through its entire extent, turn out the clots, and secure both ends of the vessel by ligature: and although the case eventually terminated in a perfect radical cure, yet the patient had to undergo a severe attack of inflammation, profuse suppuration, and a confinement so protracted, that it was two months before he was able to walk abroad. This is the only casualty of the kind I ever experienced, and a recurrence of it is, I think, sufficiently provided against by the precaution of cutting carefully through the teguments before the tunica vaginalis is opened. I now perform this operation with the greatest confidence, and without more preparation than may be necessary to ascertain whether the parts are in a condition to warrant any interference at all, and think I have so treated cases in which the injection would scarcely have proved successful. There is a patient of mine now pursuing the laborious occupation of a porter, on whom the operation was performed six years since; it was a case of double hydrocele, of immense size, the scrotum being so distended that the penis was obliterated, and appeared like a navel in the middle of the upper portion of the tumour: one of the cysts contained a dark-coloured fluid like port wine, evidently produced by an admixture of blood, the result of some recent blow or accident. In this case both the hydroceles were operated on at the same time, yet the patient progressed without a bad symptom, and was so far recovered as to be able to leave the hospital in less than four weeks. The disease has never returned since.

I have also operated on a double hydrocele complicated with hernia—a practice which I would by no means recommend, but which may be mentioned, as exhibiting the comparative mildness of the effects of this mode of treatment.

In any deviation from the beaten track I am aware that the innovator is apt to magnify the importance of his own opinions, and perhaps he may do so without any intention to deceive, attributing to them advantages which they may not possess in

any eyes but his own. For this reason I wish to advance my own with as much moderation as possible. I claim no discovery—it would be difficult indeed to establish such claim in the treatment of hydrocele—but merely the revival, with some modification, of a very ancient mode of practice; and the value I am disposed to attach to it may be comprised in a few words.

The operation I advocate is scarcely more painful than the ordinary puncture by a trochar, and, if carefully performed, is free from the possible occurrence of any untoward accident: it is decidedly more exempt than that by injection from the inflammation and suppuration of the cavity, with all its unpleasant consequences—indeed the quantum of inflammation is generally rather below what is desirable than otherwise; and the cure is perfected much more rapidly than by any other radical mode of treatment whatever. Here, however, I rest all claim to superiority, for the recovery is sometimes incomplete, and the disease returns, but if it does so, and after some time the patient finds his expectations falsified, and his suffering and confinement endured in vain, it is no more than what may and often—very often—has happened under the more favoured treatment by injection. The point then would be, to ascertain in which case there might be a greater probability of relapse, and this I am unable to determine, neither do I think the opinion of the advocate of a particular operation would meet with or deserve that implicit reliance should be placed upon it. It must be tested by every practitioner for himself; but of the positive advantages I have detailed there cannot be the smallest doubt. During this past winter I have performed the operation on two patients, and directed the attention of a large class of students to them. They both recovered within the short space of three weeks, to all appearance perfectly and radically cured, and have remained so, for I have seen them frequently since: it would, however, be premature to calculate on the impossibility of a relapse, although there is no reason to apprehend such a result, or to fear for these men more than for numbers of others, who, ope-



rated on at different periods during the last fifteen years, are many of them still living proofs of the radical efficacy of this operation.

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ART. XV.—*On Polypoid Growths of the Uterus*. By D. B. BULLEN, M. D., one of the Surgeons of the Cork North Infirmary.

[Read at the Cork Medical Society.]

THE cases of polypoid disease of the womb which I wish to bring under the consideration of the Society are, 1st. The simple or true fibrous polypus ; 2nd. The cystic polypus ; 3rd. The malignant, granular, or tubercular polypus, sometimes called the cauliflower polypus. The uterus may also be the seat of various deposits and morbid growths, the more frequent of which is the fleshy or fibrous tumour. These fleshy tumours occupy different situations in relation to the component parts of the substance of the uterus. They may be developed either immediately under the peritoneal coat, or in the muscular substance of the womb itself, or directly between the proper tissue of the uterus and the internal mucous membrane. This is the description of uterine tumour which sometimes degenerates into a cartilaginous substance, and becomes the seat of osseous or calcareous formation, and has been described by old writers under the name of womb-stones. These fleshy tumours are not very vascular, and do not entail much danger to the patient, except when pregnancy supervenes, or the uterus becomes the seat of inflammation.

The term polypus of the uterus is used to designate tumours, which grow from the inner surface of the uterus, or of its os or cervix, and are attached by a neck or pedicle, less in diameter than the body of the tumour itself. They originate under the mucous membrane, which still covers them, and expands with their growth. It is difficult, nay almost impossible, to detect a polypus of the fundus of the uterus in its earlier stages, until it enlarges and distends the uterus to a degree that often excites

a suspicion of pregnancy ; it causes scarcely a perceptible change in the appearances of the organs of generation. At a very early period, however, it frequently occasions profuse hæmorrhage. This discharge of blood would appear to proceed from the congested state of the vessels of the mucous membrane covering the tumour, which become gorged and varicose from impeded circulation, produced by mechanical pressure, and is brought on by any circumstance that causes a determination of blood to the uterus. The bleeding that accompanies polypus is generally checked and controlled for a time, by the same agents that are found effectual in arresting other kinds of active hæmorrhage from the uterus. As the irritation produced by the growth of the tumour gives rise to an inflammatory state of the lining membrane of the vagina, the mucous secretion of the passages is increased, causing leucorrhœa, which sometimes becomes very purulent and offensive. Sooner or later this discharge becomes coloured by a constant sanguineous oozing from the polypus. If the patient still continues to menstruate, severe hæmorrhagic discharges are observed to occur at the menstrual periods. The time of life at which polypi develop in the uterus is extremely various ; they sometimes grow even during pregnancy, and have been found in women who were never married.

Eliza Hickey, aged 50 years, was admitted into the North Infirmary on the 5th of April. She has had seven children, the youngest seven years since ; catamenia never ceased ; about ten months began to have heavy losses, most severe at the menstrual period. A week before Christmas she was attacked with violent hæmorrhage, accompanied by bearing down and forcing ; after much straining a large tumour came down into the vagina, and protruded from the vulva. Up to this time, except from loss of blood, she had not suffered much uneasiness, nor felt much pain. A midwife, supposing it to be a prolapsus of the uterus, replaced the tumour in the vagina. Since the protrusion of the tumour, the losses have been incessant, with occasional retention of urine, and whenever she makes a continued effort to bear

down it protrudes at the vulva. The appearance of this polypus is similar, in many respects, to a prolapsed or inverted uterus, and a mistake in the diagnosis could easily be made upon a casual inspection. The tumour is of great size, and occupies the whole space of the vagina. The mucous membrane which covers it is extremely vascular, and several large veins tinged with blood can be distinctly seen ramifying through it. Upon the surface are irregularities with a marked indentation, that has quite the appearance of the os tinæ. When the polypus is replaced in the vagina, the tumour is felt in the hypogastrium, above the pubis, of the size and shape of the womb in the sixth month of pregnancy. When the tumour is forced down beyond the vulva, the abdominal swelling disappears, and on passing up the finger as high as it can reach, the base is found broadly attached to the fundus, which it drags down in its descent, and inverts the uterus. In cases of this description the uterine bougie or sound, proposed by Professor Simpson, may prove a very useful instrument, especially where the tumour, growing from a broad base, projects from the os uteri, and the other symptoms may leave a doubt whether the tumour was a true polypus, or the fundus of the womb chronically inverted. If the bougie passes along the tumour into the uterine cavity to its usual depth, the disease is not inversion of the uterus. In making this exploration, however, the uterus should be replaced *in situ*, and the fundus felt through the hypogastric walls, for if, as in Eliza Hickey's case, the polypus drags down and inverts the uterus, the sound will be prevented from entering into the uterine cavity.\*

Having brought the tumour as far beyond the vulva as could be done without using much force, a ligature was applied to the base, taking care not to include any portion of the uterine walls;

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\* Since the above paper was read before the Society, a very able article upon uterine polypus, by Dr. Ashwell, has been published in the Guy's Hospital Reports, in which are some observations of a similar purport to those I have made.



upon tightening it, the substance of the neck of the polypus gave way a little under the pressure, and there was a rush of blood. Applying the ligature did not cause much pain. The tumour was then replaced in the vagina. 10 o'clock that night, complains of sharp pain in the womb, with much general uneasiness; great irritation of the bladder, and frequent inclination to pass water, which comes away in small quantities; great pain in loins and sacrum. The tumour can be felt above the pelvis, inclining to the left side, but there is no distention of the belly, nor is the pain increased on pressure; no vomiting; pulse 76; the discharge from the vagina is very abundant, consisting of muco-purulent fluid deeply coloured with blood; ordered fomentations to the abdomen, and to take a grain of the watery extract of opium every four hours.

April 7th, forty-eight hours after the operation, complains of great pain in the back and lower part of the pelvis; cannot force down the tumour; and the abdomen is swelled and tender to the touch; the discharge from the vagina is exceedingly offensive; pulse very small and quick; tongue foul and dry; the expression of the countenance anxious and sunken. The symptoms manifestly indicate the accession of irritative fever, preceding mischief within the abdominal cavity, so that it becomes necessary to remove the tumour from the uterus without delay. I applied Levret's midwifery forceps, which locks with a screw, to the tumour, and by using torsion with a considerable degree of force, succeeded in detaching and extracting a globular fibrous polypus larger than a child's head; it weighed nearly two pounds. An immense quantity of foetid, muco-purulent fluid, which had been pent up in the cavity of the uterus, escaped upon the extraction of the tumour, and she passed a great quantity of urine. There was some hæmorrhage, which was checked by injecting a solution of alum into the uterus. The ligature remained attached to the neck of the polypus, but did not appear to give her any uneasiness.

April 10. The ligature has come away, and she feels quite

easy and comfortable ; scarcely any discharge from the vagina ; all feelings of uneasiness in the abdomen have disappeared. Passes urine freely, and without irritation. Countenance pale, evidently from anemia, and pulse very small. Ordered the sulphate of quinine and full diet.

Incised wounds, of even a trivial extent, within the passages lined by mucous membrane, are very apt to give rise to troublesome hæmorrhage. It is therefore the safer course to avoid, if possible, the use of the knife in removing morbid growths from the uterus and within the vagina. A ligature can always be applied without difficulty or danger, and after compression shall have induced a certain degree of adhesive inflammation in the surrounding parts, so as to diminish the chance of hæmorrhage, the separation of the tumour can be effected with perfect safety by torsion or excision. If the polypus, after being tied, is allowed to remain within the uterus until it becomes putrid, the constitutional disturbance arising from the absorption of putrid matter may give rise to fever of a typhoid type, and to purulent depositions in the appendages of the uterus. About four years since I removed a very large fibrous polypus from a woman of the name of Julia Kearney. It was attached to the fundus of the womb. This woman never had children, and the passage was very rigid and irritable, so that there was great difficulty in reaching the neck of the tumour. A strong ligature was applied by means of Gooch's double canula. The polypus did not separate for nine days. Although tightening the ligature was not felt, yet after a few days the uterus became exceedingly painful, the abdomen tender and swelled, and the vagina so very irritable, that it was impossible to make any attempts at manipulation. About the sixth day the constitutional fever was of a typhoid type, which continued for some days after the polypus came away, and seriously threatened the life of the patient.

If the large polypus in Eliza Hickey's case had been allowed to remain until it had become a putrid mass, obstructing the discharge of the muco-purulent fluids from the cavity of the

uterus, the ovarian tubes would soon have been gorged with pus, and dangerous febrile symptoms would have ensued. In the last number of the *Provincial Journal* a case is detailed by Dr. P. Murphy, in which he applied a ligature to an uterine polypus in a lady of 43 years of age, and otherwise healthy. The tumour had not been brought away even on the twelfth day, though from the time of the operation the discharge had been peculiarly offensive. Pain in the epigastrium came on, which continued to increase, with vomiting, and the patient died. Upon dissection the abdomen was found much distended, adhesion of the peritoneum slight and general, but recent. Left ovary converted into numerous thin transparent cysts, containing a straw-coloured fluid. Right ovary could not be traced, but in its site, and close to the uterus, was an abscess, which had given way, and on being fully opened its wall was found gangrenous. The polypus lay loose in the vagina. Here we have the patient going on well for a few days, when rigor sets in, followed by vomiting, sweats, pain and swelling of the abdomen, foetid discharge from the vagina, pulse small, frequent, and she dies, with manifest indications of low, diffusive inflammation of the peritoneum, pus in the fallopian tube, suppuration commencing in the ovary, sloughing of the substance of the uterus, and all the appearance of uterine phlebitis. This train of symptoms does not seem to have arisen from acute inflammation originating in that portion of the uterus to which the polypus had been attached, and the ligature directly applied, and extending from thence along the membranes of the neighbouring parts. They appear more to have been produced by the presence of an offensive source of irritation within the uterus, and the poisonous influence of the absorption of putrid matter. There are strong grounds for assuming that earlier abstraction of the tumour would have prevented such a formidable train of consequences.

The investing membrane of an uterine polypus is sometimes the seat of inflammation, and if the patient has not previously



applied for medical aid the difficulty of making a correct diagnosis is increased by this cause. On making an examination, the surface of the tumour is found coated with coagulable lymph, and adhesions are formed between the polypus and the internal surface of the dilated uterus and of such portions of the vagina as may be in contact with it. This circumstance gives the polypus more decidedly the aspect of a prolapsed uterus, and may easily be mistaken. If, in a case of this description, inflammation should be followed by sloughing, and the tumour separate and be thrown off, a person may easily be led to imagine that it was the uterus itself which had been detached and came away.

The cystic variety of uterine polypus more generally grows from the cervix uteri, and seems to consist of a morbid hypertrophy of the submucous or mucous membrane of the affected part. About three months ago a young woman from Inniscarra applied at the Infirmary with a cystic polypus, which protruded at the vulva, and was attached by a narrow neck to the anterior portion of the cervix uteri. The tumour consisted of a semi-transparent, but very vascular, membranous sac, which appeared filled with gelatinous fluid. It had a good deal the character of being a dilatation of one or more of the Nabothian glands. Her attention was first directed to this tumour immediately after the birth of her first child, which took place three months previously, when it was supposed to be some portion of the placenta which had not come away. It caused no pain, and gave her very little uneasiness. When it was proposed to her to come into hospital and have it removed, she expressed a wish to postpone the operation until she had weaned the child she was suckling. She went home, and has not yet come back. When she does I shall remove the polypus, by applying a very fine ligature. Now nothing could be easier than to snip off polypi of this description with a scissors, but some cases in private practice have come to my knowledge, in which profuse and unmanageable hæmorrhage ensued after this very trivial operation. I have seen a wound in a mucous membrane, scarcely larger

than a leech-bite, pour out a quantity of blood that was embarrassing. A single drop each second is a drachm a minute, and nearly half a pound in the hour. Pressure is useless, for if you plug the vagina the compress acts as a warm stupe, and increases the flow of blood. Styptic washes are quite unavailing, and the only means to be depended on is the actual cautery. The necessity, however, of using the actual cautery in cases of such apparently trivial character, causes so much alarm in the minds of the patient and her friends, especially in private practice, that it had better be avoided.

The morbid anatomy of the cauliflower excrescence of the uterus is still doubtful, as pathologists have not yet agreed whether to consider it as partaking of the nature of erectile tumour or of vascular sarcoma. When this form of disease is recognized in its earlier stages there can be no doubt that many of the more characteristic symptoms of sarcomatous development are absent, but as it advances it becomes the seat of malignant tubercle and encephaloid deposit. The growth, even at the time that it appears to be little more than an irregular vascular vegetation within the os uteri, has the small granular character well marked upon its surface; and if a portion be broken down, the vascular or cellular framework becomes perceptible, interspersed with distinctly organized opaque bodies like tubercles, scattered through which transparent hydatids can frequently be seen. These developments present all the features of the malignant parasite, so admirably described by Mr. Carmichael. The cauliflower polypus is not attended with much pain, and the tendency to active arterial hæmorrhage constitutes one of the most marked symptoms of the disease.

This form of uterine tumour appears to be hereditary in a very remarkable degree, as it presents itself in several of the female members of the same family. Three sisters in one family of the highest respectability in this neighbourhood, died upon successively reaching the age of 43 years, of this disease. The three were married; one had a numerous family, the other two

never had children. On the 4th of last February I was sent for to see Mrs. M'C. She was about 40 years of age, had had five children, and been generally healthy. Three months before I saw her, she had been confined of a healthy child. The labour was natural, and not very severe. For some days after delivery the lochial discharge was unusually abundant, and upon getting out of bed at the end of a week she was attacked by a sudden and heavy flooding that made her swoon. This circumstance recurred every time she attempted to make any exertion. When I saw her she was very pale, and evidently suffering under the effects of continued losses of blood. She did not complain of any pain whatsoever; had not much leucorrhœal discharge; but between the accessions of hæmorrhage some watery secretion kept flowing away, which was quite inodorous. I ordered her the superacetate of lead, with enemata of cold water and laudanum, and cold applications to the lower part of the pelvis and the insides of the thighs. Under this treatment the hæmorrhage was arrested for a week. At the end of that time I was sent for again, and found the hæmorrhage had returned with great violence. I immediately examined the uterus, and on passing my finger within the os, found it very much dilated, and plugged up with an irregular, rugged tumour, growing from the internal surface, and extending round the whole circumference within the cervix. On dilating the vagina with the speculum, an irregular shaped granular mass is seen projecting into the passage. The colour of the tumour is a dull, sodden grey, interspersed with patches of a pale red, and dotted over with distinct, whitish, granular bodies, about the size of mustard seeds. The general aspect of the polypoid growth does not exhibit that degree of vascularity which may be expected in a morbid development, which occasionally pours out blood in such great profusion. The circular lip of the os uteri can be distinctly traced by the finger, soft, lying over, and protruded before the polypoid excrescence. The base of the tumour takes its rise about three-fourths of an inch within it, and the texture of the edge of the



cervix has not yet been disorganized by the extension of the disease. The patient does not complain of pain in the affected parts, and bears pressure upon the hypogastrium. She allows the speculum to be used, and the tumour to be handled, without any expression of pain. Upon leaving the room after examining her, I told her sister there could not be doubt of the nature of the disease, and that I feared the complaint was of a malignant nature, and there were unhappily serious grounds for apprehending it may terminate fatally. She at once expressed herself quite prepared for the communication I had made; for just seven years before my father had been called into consultation upon their eldest sister, who was attacked in the same way, and after examining the womb he gave his opinion in much the same words I used, and in four months after she died. Palliatives being the only measures here indicated, I directed the extract of conium, with the use of cold water enemata, whenever there should be a recurrence of the hæmorrhage. Latterly the losses of blood have not been either so frequent or violent, but I consider this change owing to the state of anemia subsequent upon previous bleeding. The watery discharge has increased in quantity, being of a brown colour, and still inodorous. Her face is deadly pale, with dropsical swelling beneath the eyes, and the lower extremities are beginning to become œdematous.

This form of disease differs in a marked degree from carcinoma of the womb. The sensations of pain in cancer of the uterus are most acute, hot, and lancinating. The process of ulceration goes on rapidly, and the neighbouring lymphatic glands participate in the diseased action. The contiguous structures of the uterus and upper part of the vagina, the posterior wall of the bladder and urethra, and the anterior wall of the rectum, with their connecting cellular tissues, become blended together in one mass of carcinomatous ulceration. The surface of the ulcer is exquisitely painful when touched. The leucorrhœal discharge is foetid and sanious, and by its acridity causes pruritus and excoriation of the passages and vulva. The func-

tions of the bladder and rectum are greatly disturbed, and, if the patient survives for any time, perforation of their coats takes place, so that the vagina becomes a common cloaca for the discharge of the urine and fæces. In Mrs. M'C.'s case, although the disease is now very far advanced, there is no change of structure in a very considerable extent of the cervix uteri. The whole of the canal of the vagina is healthy, and the parts in connexion with the bladder and rectum do not offer any alteration of structure. It seems as if the morbid vegetation grew from a defined and circumscribed root confined to a limited portion of the uterus, and that the tendency to disorganization does not extend along the circumjacent textures in a degree proportionate with the increasing growth of the polypoid excrescence. This particular characteristic of the cauliflower polypus was strongly evinced in another case that I had under my care a short time since.

Mrs. P., aged about 30 years, had been much reduced in flesh and strength by repeated and severe miscarriages. The last abortion took place in the sixth month of pregnancy, and was attended by painful and protracted labour, which was followed by unusually abundant losses. From the time of her delivery a sanguineous discharge never entirely ceased, and occasionally there was a rush of pure blood. She did not complain of pain in the region of the uterus, and bore pressure on the lower part of the abdomen without inconvenience. Finding the uterine hæmorrhage to continue, after a few days I examined the womb, and found the polypoid vegetation already grown to a considerable size. Its base was situated within the uterus, and involved, at least, one-half of the circumference of the cervix. The morbid growth already projected beyond the os uteri into the vagina. By means of the double canula I was able to carry a loop of silver nearly round the whole base of this polypoid tumour, but upon attempting to tighten it, the wire easily cut its way through the diseased mass, and detached a large portion of it. Arterial blood poured out in large quantities, and though

the bleeding was somewhat checked by injecting alum and water, it did not cease until the patient had fainted. Nitrate of silver was then freely applied to the parts from which the portion of the tumour had been separated. This operation appeared to have checked the growth of the excrescence for some time, and she went to the sea side for change of air. At the end of some months I saw her again, and found the polypoid vegetation had grown with fearful rapidity. It then nearly occupied the pelvic cavity, filling up the vagina, and with a considerable portion protruding from the vulva. In the left iliac fossa there was a hard defined tumour, not very painful to the touch, but conveying the impression that the morbid growth had developed in the ovary and was expanding in the abdomen. The pressure of this diseased mass upon the bladder and rectum made the evacuation of the urine and fæces attended with the greatest difficulty. With the increase in the size of this tumour the tendency to arterial hæmorrhage diminished, and the greatest uneasiness was produced from its bulk, and the mechanical pressure upon the important organs in its immediate vicinity. On passing the hand along the sides of the tumour, I found the base could still be felt clear and circumscribed, as at the time of my previous examination. The edge of the os uteri was yet defined and soft; the walls of the vagina, and its connexions, did not present any signs of carcinomatous disorganization, nor had the polypoid growth formed any adhesions with them. Operation with a view to remove the disease was not to be entertained, but the sufferings from the pressure on the bladder and rectum became so urgent, that I was obliged to make an effort to obtain even a temporary mitigation. By means of the canula and wire I succeeded in bringing away a large basinful of the diseased mass. The flow of blood was tremendous, and only ceased after continued syncope, when all arterial action appeared to have been suspended. The surface of the substance which I removed was rough and granular; its texture very friable, and easily rubbed down between the fingers, showing a reticulated appearance



like sponge. Lobulated aggregations of small, whitish, opaque bodies, manifestly tubercular, were thickly scattered throughout its extent, interspersed with distinct cavities containing transparent hydatids. The size of the morbid growth was much reduced upon removal, showing that its great bulk was chiefly owing to the quantity of blood which it had contained. In some weeks the rapid regeneration of the tumour compelled the unfortunate patient to solicit again its removal, even at the risk of sinking under the loss of blood. She bore up against the hæmorrhage at the operation, but the drainage of the system was too much, and she sunk in a few days under the general symptoms of anemia and constitutional exhaustion. This lady was an only daughter, and gave me to understand that her mother and aunt had both died before the age of 40, under similar circumstances with herself.

It is a sad admission to make that this formidable disease, selecting its victims amongst women in the prime of life, and generally making its appearance at times connected more or less with parturition, should be unmanageable by the curative agents which science has yet placed within our reach. Attempts to destroy cauliflower excrescence of the womb by the application of the ligature and use of caustic are only temporary measures, and there is much reason to fear that the irritation consequent upon these means sometimes gives increased activity to the development of the disease. If it was possible to recognize this growth at a very early period, and to ascertain that the base was confined to a defined part of the cervix, and did not involve the texture of the body of the uterus, amputation of the cervix uteri offers the only chance of removing the disease with ultimate success. These cases, however, at their commencement, are most insidious, and on account of the absence of pain and any leading symptom are completely masked under the appearance of menorrhagia, or profuse lochial discharge. It is only when the morbid growth has attained a certain bulk, encompassing the greater part of the internal circle of the cervix,

and filling up, and distending the cavity of the uterus itself, that the real nature of the disease is recognized. In every case I have yet seen the tumour grew from within the uterus, and its aspect was widely different, and easily distinguishable from the florid warty vegetations, which are often seen upon the external lip of the cervix, accompanying obstinate leucorrhœa and certain forms of syphilis. Partial excision of the neck of the womb would be worse than useless, and amputation of the whole cervix, to insure extirpation of all the diseased part, could alone be entertained. In estimating the cogency of the reasons which should influence us in determining amputation upon an organ so inaccessible as the uterus, we should bear in mind the unfortunate results of the majority of operations performed for the removal of diseases really malignant. The tubercular character of cauliflower polypi of the womb, together with the presence of hydatids in their structure, and the tendency to the development of encephaloid deposit leaves little doubt of their malignant nature, although they may run their course without carcinomatous ulceration, and the other symptoms which distinguish true cancer. There is no question of deeper interest at present occupying the minds of professional men than to arrive at some satisfactory principles for determining the diseases in which operations are advisable. The proposition in medicine has not yet been solved, whether diseases mild in their origin become malignant in their maturity. Upon this point, however, the more recent manifestations of opinion appear to assume, that growths essentially malignant are malignant *ab initio*, or from their first development in the system; and that when the peculiar state of constitution occurs which suffers the malignant formation to start into existence, there can be no security against a renewed invasion of the disease. It must be confessed that the honest exposition of the accumulative experience of modern surgeons is diminishing the confidence hitherto reposed in the knife for the removal of cancerous and malignant growths; and strong proofs are daily being adduced that the average duration

of life is longer in those cases which are not subjected to operation. By the statistical Report read before the last Scientific Congress of Italy by Dr. Regnoli, it appears that out of 250 persons on whom cancerous formations had been extirpated by the knife, scarcely twenty had survived three years. The discussions at present going on in the Academie de Medicine of Paris, show that the more extended researches in the pathological anatomy of abnormal organic productions have materially modified the current opinions which have heretofore prevailed amongst the most eminent operative surgeons in France. Upon this subject a most valuable light has been thrown by the statistical statements of M. Leroy d'Etiolles, which shew the importance of calculations made of the relative duration of life between numbers of persons affected by cancerous complaints who have been operated on, and who have not undergone operation. My own experience leads me to the conclusion that carcinomatous developments, if left to themselves, may be eventually, but are not immediately fatal, and that the extirpation of cancerous and malignant growths does not prolong life. In tubercular polypus of the womb I would not therefore, unless the case presented itself under singularly favourable circumstances, advise a patient to undergo excision of the cervix uteri. This question of accurately determining the differential diagnoses in cases of cancerous degeneration and fibrous formations, with regard to deciding the propriety of operating and avoiding operations, is most important, not only in a scientific point of view, but as deeply involving the comforts and feelings of a large class of patients and their friends. Happily for society the time is rapidly passing away when medical men could build a reputation of professional eminence upon the mere practice of mechanical dexterity. Other and higher qualifications are now required, and it is the special province and first duty of associations formed for the advancement of medical science, to collect the individual experience of their members, and, by accumulating evidence, to lay the groundwork for enabling the Profession to arrive at true and



practical judgments upon such subjects. In such inquiries speculation only leads to error. Facts and the aggregate testimony derived from the results obtained by the practice of medical men scattered over great space and much time, giving, with candour and fairness, the number of recoveries and deaths, can alone furnish the elements for sound and satisfactory conclusions.

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ART. XVI.—*Some Observations on the early History of aural Surgery, and the nosological Arrangement of Diseases of the Ear.* By W. R. WILDE, M. R. I. A., Surgeon to St. Mark's Ophthalmic Hospital and Dispensary for Diseases of the Eye and Ear.

IN the present day, when literature in every Protean shape and form has compassed the land, and knowledge may be truly said to run to and fro throughout the earth; and when the polyglott cyclopædia of the press has outstripped in the race all other feats of human prowess of the nineteenth century, it might be deemed unnecessary to follow the old school system of detailing the early history of that particular branch of the healing art, or its elementary or collateral sciences, of which this essay treats, were it not that in an art but just emerging from the darkness, ignorance, empiricism, prejudice, and superstition, which is even yet the condition of aural medicine and surgery, its history not only becomes interesting, but practically instructive.

I might, with the generality of writers upon the history of medicine, commence with the times of Hippocrates, for he makes several allusions to the affections of the organs of hearing, not, however, as idiopathic forms of disease, but as symptomatic of other maladies of an acute and chronic nature; but it must be borne in mind that at that period of medical science (and, I regret to add, that it has in a great part descended to the present) the affections of the ear, whether functional or organic, were spoken of, lectured on, written of, and described, not according

to the laws of pathology which regulate other diseases, but by a single symptom, that of *deafness*. “If,” says Dr. Kramer, “by tumours behind the ears, to be dispersed by copious diarrhoea if they are not to prove fatal, we are to understand otitis interna and its terminations, and carious destruction of the mastoid process, as a result of the otitis interna; and if, further, I mention that the treatment of deafness (viz. as it occurs as a functional disorder only of the ear, without any perceptible external alteration of the organ) merely consists of not washing out the ear, but cleansing it with wool, dropping in oil, directing the patient to walk out, rise early, drink white wine, abstain from salads, and allowing him to eat bread, and such fish as inhabit *rocky* shores, I shall have collected *all* that is of most importance to give an idea of acoustic medicine at that time.”

To Celsus, the successor of Hippocrates, we are indebted for the first acknowledgment of the specific or independent forms of aural disease—for having introduced the practice of ocular inspection of the auditory canal—and for some general rules for the treatment of the inflammatory affections of the organs of hearing; but this advance in acoustic medicine, which we owe to Celsus, is more than counterbalanced by his introduction into practice of those stimulating nostrums which were then, and have been since, applied to the *membrana tympani* without discrimination and without mercy; and many of which are made use of in the present day. Galen followed in the track of his great predecessor, and although he advanced somewhat in sytmatology, and although he was evidently better acquainted with the *causes of the inflammatory diseases of the ear*, yet he and his disciples so increased the number of remedial agents, which were applied to the external meatus, that we find aural medicine and surgery, toward the end of the fifteenth century, but a collection of hard names, and unconnected symptoms, the fanciful theories based on causes the most improbable, and a category of medical substances from the animal, mineral, and vegetable kingdoms, principally, however,

composed of hot spices and stimulating applications, of which I may mention castor, ox-gall, garlic, frankincense, opium, nitre, alum, iron filings boiled on vinegar, hellebore, myrrh, turpentine, and many other such substances, each lauded by their respective admirers, and extolled as panaceas for deafness in all its numerous forms and modifications.

It would afford us neither literary interest nor practical utility, commensurate with the task, to detail the notions concerning the treatment and diseases of the ear, as they may be found scattered throughout the writings of Aurelianus, Paul of Ægina, Razes, Serapion, Hali Abbas, Mesue, and Dioscorides, the works of the three latter of whom were translated into Gaelic by several distinguished Irish physicians from the beginning of the fourteenth to the end of the sixteenth century.

At the conclusion of the fifteenth century the anatomy of the ear received a new impulse, and was raised to its proper footing by the investigations and discoveries of some of the most distinguished anatomists and physicians of that age, and in compliment to their labours it was, that the subsequent anatomists gave those parts names which we retain to the present day, as, the tube of Eustachius, the aquaduct of Fallopius, the liquor of Cotunnus, and the fissure of Casserius; but although these distinguished men made the world better acquainted with the anatomy of the organ of hearing, and thus removed one of the greatest obstacles to the investigation of aural pathology, their successors in medicine advanced but little in the investigation and treatment of diseases of the ear.

The first special work upon the ear that I have been able to discover is that of Heurnius Mercurialis, entitled, “*De oculorum et aurium affectibus Prælectiones*,” and the first edition of which was published at Frankfort in 1584.

Mercurialis was chiefly a compiler from the works of the Greeks, Romans, and Arabians, and as an original investigator deserves no credit; but he collected all that was known and had been written before his day on aural disease; the little he did



add, was that of a few more *nostrums*, and therefore he may be consulted with advantage by those of the fraternity who *still* adhere to the good old rule of applying such remedies as hot onions in acute inflammations of the meatus or tympanum.

I must not omit to mention, as connected with aural pathology, that it was in this, the sixteenth century, that the attention of the philanthropist was first turned towards the lamentable condition of the deaf and dumb. Prior to that period, during those ages wont to be called enlightened, and in those countries styled civilized, and even refined, among the Egyptians, Greeks, Romans, and Hebrews, and even still in the Orient, the deaf mute was, and is, but little removed from the brute, and is often employed for the basest and most degrading offices, such as humanity in the present day, at least in this country, shudders at. Up to this period the deaf and dumb were not considered susceptible of improvement or instruction of any kind, and their very passions, unrestrained by any influence, human or divine, were frequently made to minister to the cruelty or sensuality of those around them.

How long this might have remained the stereotyped condition of these unhappy, isolated children of Adam, but for the fatherly affection of Joachim Pascha, the chaplain of Prince James the Second, of Brandenburg, about the year 1560, it is difficult to say. This good and venerable man undertook, and succeeded in instructing his own mute daughter by means of a series of pictures. After him a Spanish Benedictine monk at Sahagan, in the kingdom of Leon, one Petro de Ponce, who died in 1584, taught the two sons of a Castilian nobleman and a young Arragonise to read and write with elegance, not only the language of their own country, but also the Latin tongue; and it is also related by Ambrosio Morales, the historian of this distinguished and indefatigable man, that they could understand by sight the expressions of the lips; and likewise spoke as those do at present who have been taught in a modern deaf and dumb institution.

Having elsewhere enlarged upon this subject, I have made

this digression merely for the purpose of fixing the date of an interesting inquiry in aural pathology.

The first book that treated of our subject in the seventeenth century was a posthumous Latin work of Jos Heurnius, on the diseases of the organs of hearing, published by his son, the celebrated Otho Heurnius, in 1602. Lincke, however, says that he was but a compiler.

Heretofore the treatment of aural diseases consisted, for the most part, in medical agents and empirical nostrums; but at the beginning of that century (that is in 1646), the principles of surgery were brought to bear upon this class of affections by the master hand of Fabricius von Hilden. His observations on the extraction of foreign bodies, on polypus, and other affections of the external auditory conduit, are well worthy of perusal; and to him is generally ascribed the invention of the first speculum auris, as well as the first ear instruments on record. This speculum was formed on the principle of the common forceps-like instrument now in general use.

This is the instrument, or one similarly constructed, which tradition has handed down to the present day, as having been used by Fabricius; but from the following passage in a still older writer, Peter de la Cerlata, "*per inspectionem ad solem trahendo aurem et ampliando cum speculo aut alio instrumento*," I am led to believe that means were employed before his time for examining the external auditory passages. Instruments of this kind, and for this purpose, having been once recognized and employed by practitioners, have since been variously modified, according to the ingenuity of the inventor;—yet their first introduction into practice decidedly formed an epoch in aural surgery. Fabricius's observations, and the description of his instruments, will be found in his "*Opera Omnia*" published in 1646.

After the days of this great surgeon, the next work of any merit that appeared in connexion with aural medicine, was published by a Genevese anatomist, Theophilus Bonet; his observations, as they are set forth in his great work, the "*Sepulcre-*

*tum*," or "*Chirurgica Practica*," were chiefly confined to the pathology of the ear from dissection ; but in a practical point of view he advanced little beyond the limits attained by his predecessors. A few years later, toward the conclusion of the seventeenth century, aural surgery received a new impulse from the talents and laborious investigations of the distinguished French anatomist, Du Verney. Of late it has become the fashion to decry the labours of this great man—in my humble judgment unjustly—for he was far in advance of his time, and although the pathological is not as voluminous, nor perhaps as accurate as the anatomical part of his writings on the organ of hearing, still he was a lucid painter, and a graphic describer of disease. He was the first person who arranged the diseases of the ear according to the anatomical structures affected, as, into those of the outer ear and meatus, those of the middle ear or tympanum, and those of the internal ear or labyrinth. From the times of Eustachius to the period on which we are now engaged, we have no work upon the anatomy of the organ of hearing equal to that of Du Verney's, and to this day it may be consulted with advantage. We likewise are indebted to the work of Du Verney far more than is generally acknowledged, or perhaps writers are aware of, for having given the first impulse to anything like a knowledge of aural anatomy and surgery in England ; for his book, which was published in Paris in 1683, was translated into English after his death, and published in London in 1737, being thus, though a translation, the first treatise in point of *time* upon aural medicine or surgery in our language. This is now a work of very great scarcity, yet there can, I think, be little doubt but that Mr. Saunders availed himself largely of the labours of Du Verney. Before we take leave of this gentleman I may remark, that to him, and not to Lallemand and Itard, as I lately stated, we are indebted for the prejudice that up to this day exists with regard to the treatment of otorrhœa. But the latter are the more blameable, as they, from the age in which they lived, and the giant growth of medi-



cal knowledge since his time, should have known better ; but I believe, like many modern practitioners, they chose rather to transmit the prejudices of 150 years before, than take the trouble of investigating for themselves.

Without entering minutely into the history of aural medicine during the latter part of this, the seventeenth century, which after all would consist in the enumeration of the Latin writings of various continental authors, more curious than instructive, let us pass on to the penultimate century of our own period, and I do this the more readily, for that in it aural medicine first dawned in Great Britain. It is remarkable, that the discovery which Eustachius made, of the tube which bears his name, had no practical influence upon this branch of medicine ; and that for nearly two hundred years surgery made no effort at availing itself of this improvement, for the purpose of remedying diseases of the ear. In 1724, M. Guyot, a postmaster of Versailles, proposed to the Parisian Academy of Sciences to inject the Eustachian tube, by means of a catheter introduced through the mouth, for the removal of obstructions in that canal, and also in the middle ear. It seems, however, that the French academicians were not sufficiently aware of this valuable discovery, or at least the valuable proposal (for it is a question whether he ever performed it himself).

In the latter part of the year 1741, an English army surgeon, Archibald Cleland, published in the Philosophical Transactions an account of "instruments proposed," as he states, "to remedy some kinds of deafness, proceeding from obstructions in the external and internal auditory passages." The first of these consisted "of a convex glass, three inches in diameter, fixed in a handle, into which is lodged some wax candle, which, when lighted," he says, "will dart the collected rays of light into the bottom of the ear, or to the bottom of any cavity that can be brought into a straight line." Insignificant and incomplete as this instrument of Cleland undoubtedly was, it is, nevertheless,

deserving of our attention, inasmuch as to it may be traced the subsequent *inspector auris* of Deleau, of Itard, Buchanan, and Kramer. The principal object of Cleland's inspector for throwing a stream of artificial light into the meatus, was for the purpose of discovering the presence of hardened cerumen, which he removed by means of a jet of medicated steam introduced into the external meatus, but "if," says he, "this has not the desired effect, and the person still remains deaf, the following instruments are made to open the Eustachian tube; if upon trial it should be found to be obstructed, the passage is to be lubricated by throwing a little warm water into it, by a syringe joined to a flexible silver tube, which is introduced through the nose into the oval opening of the duct, at the posterior opening of the nares, towards the arch of the palate." These Eustachian catheters had affixed to them a sheep's ureter, to the other end of which was attached the syringe, "whereby," he says, "warm water may be injected; or they will admit to blow into the Eustachian tube, and so force the air into the barrel of the ear, and dilate the tube sufficiently for the discharge of the excrementitious matter that may be lodged there." He likewise used probes, of the same size as the catheters, to explore the Eustachian tube. Cleland was either unaware of, or disbelieved, the account given by Guyot, of his having introduced an instrument into the Eustachian tube through the mouth, nineteen years before, for in his essay in the *Philosophical Transactions* he does not once allude to the circumstance. To him, however, is undoubtedly due the merit of having first introduced a catheter into the Eustachian tube through the *nose*, the only certain way, I believe, of performing such an operation.

Fourteen years afterwards, that is, in May, 1755, Mr. Jonathan Wathan published a more detailed essay in the *Philosophical Transactions*, on "a method proposed to restore the hearing when injured from an obstruction of the tuba Eustachiana." This gentlemen, who seems to have been a good practical anatomist, as well as a dexterous surgeon, had an op-

portunity of making a post mortem examination in a case of deafness, wherein it was found that both Eustachian tubes were "stuffed quite full of congealed mucus." If Cleland overlooked, or was unacquainted with the proposed operation of the Versailles postmaster, Wathan seems to have completely overlooked the more recent and effectual discovery of Cleland, but in allusion to the post mortem examination to which I have just referred, he says, in the commencement of his very admirable essay, "as all these concurring circumstances strengthen me in my opinion, they likewise incited me to make trial of an operation that was sometime ago proposed to the Academy of Sciences by M. Guyot, but the author having *never* practised it, he wanted the recommendation of facts to support and enforce it, it was, therefore, rejected by them as impracticable." And in a note, he adds, that Guyot having proposed the introduction of it through the mouth, which is quite impossible, "Petit proposed, and that learned and skilful anatomist, Mr. John Douglas, first demonstrated the possibility of passing the probe through the nose into the Eustachian tube, and to him I freely acknowledge myself indebted for the hint." The catheter used by Mr. Wathan was not much larger than a common sized probe, and was bent a little at the end, very nearly in the same form as that used by Kramer, the distinguished Prussian aurist; and with this and a syringe, he injected and washed out the Eustachian tube and middle ear. There can be no mistake about the mode of Wathan's proceeding, for he has given a very good representation of the operation in a plate attached to his Essay in the Philosophical Transactions.

I have dwelt thus long upon the operation of the introduction of instruments into the Eustachian tube, because it formed the second, and perhaps one of the greatest epochs in the history of our art; because the merit is due to our own countryman; and because none of the English works upon aural surgery are sufficiently explicit upon this point, and many of the continental ones are altogether uninformed with regard to it. Dr. Kramer, in



his critical literary review, being still under the impression that Guyot had introduced the catheter through the *mouth*.

The essays of Cleland and Wathan, imperfect as they were, were decidedly the greatest addition to aural surgery made in the eighteenth century, and had the discoveries and valuable observations of these practical men been followed up in England, it is probable we would now be far in advance of our continental neighbours.

I have been long familiar with, and have frequently exhibited to many of my medical friends and pupils, a peculiar form of deafness not depending upon apparent disease in the ear, or the acoustic nerve, in which the membrum tympani has fallen in, towards the inner wall of the middle ear,—has lost, in all probability, much of its vibratory power, and, when examined under a strong light, the handle of the malleus can be seen pressing out through it. In this affection, which, I have reason to believe, is very often mistaken for nervous deafness, we have what may be termed *short hearing*, from an alteration in the vibratory membrane of the ear, in like manner as we have *short sightedness*, or myopia, from a peculiar alteration in the curve of the cornea or transparent membrane of the eye. I find, however, upon carefully perusing the paper of Cleland,\* that he had some idea of the effect which I have here described, being produced (as I have frequently known it to be) by accident. “There is,” he says, “another kind of deafness, which proceeds from a violent clap of thunder, noise of a cannon, or the like. In this case it is probable that the position of the membrana tympani is altered, being forced inwards upon the small bones, and so becomes concave outwardly. In this case no vibration of sound will be communicated to the drum until the membrane has recovered its natural position.” With regard to Wathan’s paper, I would strongly recommend its perusal, as the cases he describes are most valuable in the diagnosis of obstruction of the Eustachian tube.

During the remaining half of the 18th century I have little to

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\* See Phil. Trans. vol. xli. part ii. p. 850.

record; the art does not appear to have advanced a single step, either in Britain or any other part of Europe. Books and essays were written, no doubt, but their authors added little to the labours of their predecessors. The great majority of these writings emanated from the German press, as, for instance, those of Gniditsch, Wildberg, Milloradovics, Kritter, and Lentin. Of the French school may be mentioned Desmonceaux and Leschevin; the writings of the latter will be found in the *Memoirs of the Royal Academy of Surgery of Paris for 1763*. Having lately had occasion to examine this dissertation, which was undoubtedly the best of its day, I am bound to say that the lavish praise bestowed upon it by the French, and the severe criticisms of the German writers, within the last few years, were alike unmerited.

Up to this period (the end of the eighteenth century) no special work upon the diseases of the ear had appeared in English print, with the exception of the translation of Du Verney in 1737, to which I have already alluded. Two English works have, it is true, been enumerated by foreign writers, but they were not written upon the diseases, properly so called, but on the congenital defects of the organs of hearing.

One of these, entitled, "*Philocophus, or the deaf and dumb Man's Friend*," emanated from Mr. Bulwer in 1648. It was chiefly founded on the history of the Castilian nobleman, to whom I have already alluded, as being one of the first mutes taught to understand language from the motion of the lips. The other work appeared in 1669, and was much to the same effect, being "*The Elements of Speech; an Essay of Inquiry into the natural Production of Letters: with an Appendix, concerning persons that are Deaf and Dumb*," by Mr. William D. Holser.

I have lately met with another work of this description, written in the year 1783, entitled, "*Vox Oculis Subjecta,—a dissertation on the art of imparting speech to the natural deaf and dumb.*"

The members of the Medical Society of London, instituted in 1773, and composed of the physicians, surgeons, and apothecaries

of that time, were not insensible to the low condition in which aural medicine stood toward the end of the last century, and in their valuable memoirs will be found some scattered notices upon the diseases of the ear, from the pens of the president Dr. Sims, Mr. Houghton, Dr. Zeucker a Prussian, and Dr. Roslet of Ostend. Most of these papers contained post-mortem examinations of cases of deafness, a practice that, I regret to say, has not been followed up, and very much to the detriment of acoustic medicine. In Mr. Sims's essay he enters into a physiological discussion regarding the nature of the Eustachian tube; the object of which was to shew, that while we heard all *external* sounds by means of, or through, the meatus externus, we were conscious of our own voice only through the Eustachian tube. The practical part of his paper is, however, exceedingly valuable, particularly with respect to the pressing of air through the tube into the middle ear, by closing the mouth and external nares, and then making a forced expiration; but this had been already explained by Cleland in 1741.

At the conclusion of the last, and about the beginning of this century, aural surgery and medicine were still at a very low ebb, particularly in Great Britain. This want of real medical knowledge by the regular practitioner upon the subject of diseases of the ear was, however, soon taken advantage of, not only by professed quacks and nostrum-mongers, but by the electrical, galvanic, and magnetic doctors of that day, who corresponded to the homœopaths, hydropaths, and mesmerisers of the present. At the period to which I allude each of these chemical agents, as galvanism, magnetism, and electricity, together with the celebrated *metallic tractors*, were applied to the ears of persons labouring under deafness, and numerous and wonderful were the cures vaunted in the periodicals of the day, as having been effected by these remedies;—cures almost equalling those now performed on the eye by prussic acid: while secret, but never failing acoustic drops, stimulating embrocations, and the like impostures, were pawned upon the public by all those who had ingenuity and effrontery enough to make money in that



kind of way. And here let us for a moment digress from the direct course of our subject, to answer a question that I have often heard propounded—Why is it that the empyric and the pretender, either licensed or unlicensed—for in those days there are as many and as impudent quacks with, as without diplomas—why is it, we are often asked, that the charlatan frequently succeeds in practice better than the honest practitioner? By the term success, we do not mean professional success in his art, but pecuniary success in life, and esteem among those with whom money “makes the man.” Now although we cannot always answer this query, nor would the same explanation be applicable to every instance, we can, however, assert one fact, which, in a great measure, contributes to the success of the quack, and it is this,—the hearty response of his patients to the lesson picked up from the showman—“speak a good word to your friends outside.” Let any well educated, honest practitioner, be called on to treat an urgent, and alarmingly dangerous case, where insidious death stands at the sick man’s door—let him bring all the powerful acquirements of long years of patient study and observation of disease—his anatomical and pathological knowledge—an eye practised to disease, and a head stored with the sound, rational, scientific, practical principles of his art—let him add to this the kindness of a friend, nay, often the benevolence of a benefactor—let him pass anxious days and sleepless nights watching each turn of disease in his patient, and ministering to every of the many wants that surround the bed of lingering sickness—let him do *all* this, and finally (under Providence) restore the patient to health and to his friends—stand, as we may say, between the living and the dead, and beckon back the approaching king of terrors, and give again to society a valuable life, and to his family the only earthly means of support—what is his reward? He is, generally at least, paid his fee, and the patient and his family are generous enough to say they feel grateful for all his kind attention ;—for we will not curtail it of whatever good

feeling may be shewn on the occasion. But compare this with a patient who imagines he is cured of an imaginary disease by a water doctor, or an atom doctor, a mesmeriser, or a magnetiser, is he not immediately converted into a partisan?—does he not become a missionary for the nostrum-monger?—does he not go about from house to house detailing the miracle of his cure, the skill of the doctor, the horrors of the regular practitioner, and the great benefit conferred upon mankind by being converted into hydraulic machines; or expressing his surprise that people will go about their ordinary business “clothed and in their right mind,” like the man from whom the seven devils were cast out, instead of being wrapped in a wet sheet; while others will wait upon you specially, to beg and entreat you will not convert your poor stomach into an apothecary’s shop by taking all that terrible doctor’s stuff, instead of procuring rest and ease to all your ills, by just such an anodyne as would be formed by pouring one drop of laudanum into the Bosphorus, where it leaves the Euxine, and drinking a thimble-full of the same water where it enters the Mediterranean! But not content with this, these medical missionaries abuse all regular practitioners, and often force (for humanity’s sake, as they say) the charlatan upon the patient, who then trusts to his address for future fame and profit. But to return to our text.

Several experiments had been tried by anatomists and physiologists upon dogs and other animals, in order to discover whether the function of hearing could be carried on with a perforate, or imperfect membranum tympani. These investigations upon the lower animals being deemed inconclusive, Mr. Cheselden, the father of English surgery, proposed to experiment in this matter upon the living human subject, and for this purpose a condemned criminal was pardoned, on condition of submitting to the operation! but a popular outcry prevented its being put in force!! Some years afterwards, Sir Everard Home, in his article upon the muscularity of the membrana tympani, having expressed his desire to know the result of perforation or de-

struction of this membrane, Mr., afterwards Sir Astley Cooper, published a letter in the Philosophical Transactions for the year 1800, entitled, "Observations on the Effects which take place from the Destruction of the Membrana Tympani of the Ear." Although this paper did not advance our practical knowledge upon the subject, yet it called the attention of British surgeons to the treatment of this important organ, and put an end to a very generally received notion among the Profession, that hearing would be totally lost on the opening of the membrana tympani; notwithstanding that a couple of hundred years ago it was believed by anatomists that an aperture existed in this structure, as a normal condition during life.

In the following year (1801) Cooper published an essay in the same work on the perforation of the membrana tympani, as a means of removing a particular species of deafness,—that caused by the obstruction of the Eustachian tube, and, according to his ideas, a consequent want of vibration in the tympanal membrane. This paper commenced a new era, and opened up a wide field in aural surgery. Like all discoveries in medicine, however, it was at the time, and in other hands, too frequently had recourse to, and often misapplied. The brilliancy of this operation, and its instantaneous, nay, in some instances, almost miraculous effects, urged men to employ it who were totally ignorant of its application, as well as of the structures and diseases of the organs of hearing generally; so that it soon fell into disuse, and although recommended by this high authority, the superior instruments we now possess of diagnosing with greater accuracy the condition of the middle ear, and its internal faucial aperture, by means of the air-douche, and also owing to the comparatively few cases of deafness *solely* depending on closure or stricture of the Eustachian tube, has rendered its performance much less frequently necessary than was at first supposed. This may be termed the third epoch in our art.

A few months before Sir Astley's death, I had a long conversation with him upon the subject, and to shew the interest which he took in aural diseases to the very last, I may remark,



that some little discussion having arisen regarding the subsequent condition of the perforation in the membrane, he at once sent off to Bond-street for a linen-draper, on whom he had operated some years before, in order to exhibit to me his ear, although, at the same time, from the number of persons who were desirous of consulting this great surgeon, there was scarcely room to sit down in any of his waiting apartments. This trivial circumstance, however, as all who knew Sir Astley are aware, was characteristic of the zeal and enthusiasm of the man.

Himley, Itard, and Deleau, improved and modified the instruments and the operation of Cooper. We cannot, however, conclude this notice of Sir Astley's improvement, without quoting the pertinent and judicious remarks with which he closes his memoir—advice and remarks, I regret to add, that have been but little attended to, and that are, therefore, as applicable to the present time, as they were to the period at which they were written, upwards of forty years ago.

“I hope others will be induced,” he says, in alluding to the success of his operation, “to second my feeble efforts, and to direct their attention to a subject which appears to be of the highest importance, and to have been too much neglected by medical men; for a knowledge of the structure of the ear is by no means general in the profession, and still less are its diseases understood. A prejudice has prevailed that the ear is too delicate an organ to be operated upon, or, as it is commonly expressed, *tampered* with; and thousands have thus remained deaf for the rest of their lives, who might have been restored to their hearing had proper assistance been early applied.”

As the space allotted to an essay of this description is necessarily limited, I find I must compress the history of our art, with few exceptions, into the labours of British aurists. I have, in the preceding pages, remarked upon the condition of aural surgery about the commencement of this century, but at the same time, I am bound to say, that the well-marked inflammatory diseases of parts of the auditory apparatus, such as the auricle,

external tube, and membrana tympani, were generally treated, by all well-educated surgeons, as in the present day, by strict antiphlogistic means, such as the local abstraction of blood, purging, and counter-irritation,—but here the judicious interference of art ceased.

First upon the list of British writers upon the acoustic apparatus and its diseases, stands John Cunningham Saunders, the distinguished oculist, and the founder of the London Infirmary for curing Diseases of the Eye, on whose merits, as an original observer, a sound practical surgeon, and a critical anatomist, I need not, to the readers of this Journal, expatiate. His work upon the anatomy and diseases of the human ear was first published in 1806, and although, as I already alluded, he availed himself of the labours of Du Verney, still to Saunders we are indebted for our first special English work upon this subject, and to him the various charlatans, that have ever ventured to set forward their ideas in print, are indebted for the mine from which they drew forth the material of their various and voluminous publications. Saunders, as an aurist, has been unjustly dealt with: he wrote, not only in accordance with, but beyond the knowledge of, his time, and Kramer not only criticises his work with too great severity, but denies it the place, which, in a chronological point of view, it deserves. This, however, is accounted for by Kramer's having quoted from, and perhaps he only had access to, the third edition, published in 1829, just nineteen years after Mr. Saunders' death. The practical portion of the work consisted of the diseases of the meatus externus, and those of the tympanum, of the obstruction of the Eustachian tube, and of the diseases of the internal part of the ear, to which are added cases of incipient nervous deafness successfully treated. The plates of Mr. Saunders' work are worthy of inspection, and were evidently drawn from recent dissections.

For six or eight years we hear nothing of aural surgery in Great Britain, and our space will not permit of our even enumerating the names of the different Continental writers for the first

twenty years of the nineteenth century. The untimely death of Saunders, and Cooper's increasing, more extended, and more lucrative line of practice, seem to have cast a veil over this branch of knowledge in these kingdoms. In the years 1813-15 and 17, we find three special works on aural medicine; of the first of these, "A Treatise on the Eye, and on some of the Diseases of the Ear," by Mr. J. Kennedy, there is little even to criticise; the second, "*Dissertatio de Aure humana et ejus Morbis*," was an inaugural essay published by Mr. Ball at Edinburgh, likewise of little note; and the third was the first work of the since far-famed John Harrison Curtis. Let us read its high sounding title: "A Treatise on the Physiology and Diseases of the Ear, containing a comparative View of its Structure, Functions, and of its various Diseases, arranged according to the Anatomy of the Organ, or as they affect the external, the intermediate, and the internal Ear." Let us draw from the writings of a foreigner, who had never seen the redoubted London aurist, the opinion that a man of honesty and practical experience formed of this and his other subsequent works. "Curtis," says the writer, "treats every discharge from the ear exclusively, and in a summary way, by means of astringents; obstructions of the Eustachian tube, with emetics and perforation of the membrana tympani; whilst in spite of all the entreaties of Saissy he has never once practised catheterism of the Eustachian tube on the living subject. He makes tinnitus the chief symptom of nervous deafness, which he treats with purgatives, especially calomel, as long as the strength of the patient holds out." "In all doubtful cases the chief attention is directed merely to ascertain whether the liquor coturnii be partially or totally deficient!! or, whether hardened wax exist in the meatus." "In the otitis of children he sticks opium into the affected ear, &c., so that throughout all his writings, nothing but the most crude empiricism is to be met with; and yet among his compatriots, as well as abroad, Curtis generally possesses the reputation of being a distinguished aurist." And one of the first English medical periodicals of the day thus ex-



presses its admiration of the same person : “ Mr. Curtis, in his treatise on the physiology and pathology of the ear, has appropriated the *whole* of Mr. Saunders’ essay. The exact words, indeed, have, in some instances, been changed, but the plagiarism is too manifest to escape even the most inattentive reader. To this paraphrase of Mr. S.’s work, Mr. Curtis has added some things from other authors, and some histories of cases treated by himself (of course all most successfully), and has thus concocted a treatise, which, with singular effrontery, he has put forth as entirely of his own composition, and as containing the results of his own practice. This work has now, for a period of about twenty years, been forced upon the attention of the public, by the advertisement of successive editions ; and it is a melancholy fact, that there should have been found editors of medical journals either so ignorant or so careless, as to lavish commendation on such a production.” Almost in a similar category may be classed the writings of Williams, surnamed the nostrum-monger, and also those of Stephenson and Wright. The latter followed something of the plan laid down by Curtis, of simply *recomposing* the words of his first work ; for as to new ideas, there were none, nor old ones to add them to. In order to form either a new edition, or a new book, we find the changes rung to the following tunes for about ten or eleven years : “ An Essay on the human Ear, its anatomical Structure, and incidental Complaints, 1819 ;” “ The Aurist, or medical Guide for the Deaf, 1825 ;” “ Plain Advice for *all* Classes of deaf Persons, the Deaf and the Dumb, and those having Diseases of the Ear, 1826,”—verily this must have been a popular book. “ On the Varieties of Deafness and Diseases of the Ear, with proposed Methods of relieving them, 1829 ;” “ Observations on the Effects of Mercury on the Organs of Hearing, and the improper Use of it in Cases of nervous Deafness, 1827.” To this was added, “ The present State of aural Surgery,” together with three or four others, all by the redoubted Mr. William Wright. To these productions may be added those of Webster, Thornton, and Fletcher ; works simi-

lar in substance and composition, although, perhaps, not so flagrant in plagiarism. There is one English work that we would rescue from the criticism which has been already applied to its predecessors. In 1823, Mr. Thomas Buchanan, an intelligent surgeon of Hull, published an engraved representation of the anatomy of the human ear, to which were added some surgical remarks upon Eustachian catheterism, together with an account of the operation of puncturing the membrana tympani, and concluding with a synoptical table of the diseases of the ear. Mr. Buchanan no doubt put forward many fallacies in his work, particularly his ideas with regard to the physiological uses and diseases of the external meatus, but in a literary point of view we may remark, that he seems to have fallen into the snare almost peculiar to English aurists, for within a couple of years he followed up whatever success may have attended his first publication, by producing two other works, one the “*Illustrations of*,” and the other, “*The Guide to, acoustic Surgery ;*” and in 1828 appeared a fourth work, “*Physiological Illustrations of the Organs of Hearing, more particularly of the Secretion of Cerumen, and its Effects in rendering auditory Perception accurate and acute.*” Buchanan, however, deserves our commendation and commands our respect, as being the first English writer who, since the days of Saunders and of Cooper, based his works upon a knowledge of the principles of anatomy and surgery ;—and to him we are indebted for the second, in point of time, improvement in the *inspector auris*, by means of which, as I have already explained elsewhere, artificial light was transmitted through the meatus on the membrana tympani.

About this time (1820) some notices of aural diseases appeared in the medical periodicals of this country, and foremost among the writers of these stands Mr. Henry Earle, whose short, but accurate and practical observations upon some diseases of the external meatus, published in the *London Medico-Chirurgical Transactions*, are well worthy of perusal ; and the *Lancet* and *Medical Gazette* likewise contain some detached

notices, and the details and pathological appearances of several cases of the diseases of the organs of hearing.

Within the last twelve years there have appeared three small works upon the anatomy and physiology of the organ of hearing, by Mr. Swann, Mr. David Todd, and Mr. Caswall. The first of these little works, from the originality of its ideas, and the speculative theory of its author, justly attracted attention in an anatomico-physiological point of view, yet neither it nor the other two with which it is associated should have been enumerated in an essay upon the history of aural surgery, but that to each were affixed some observations upon the pathology generally, and the congenital defects in particular, of this particular organ of sense. These observations, however, are as crude and unpractical as they are speculative and unfounded. I may merely mention one of these as a sample of the rest: Mr. Todd proposes as a remedy for congenital deafness depending on derangement of the structures in the tympanum, the introduction of such acrid substances as ammonia, cantharides, and the mineral acids, in order to produce such an inflammation as may rouse into activity the dormant powers of the parts contained within that cavity!

Here we leave English aural surgery for the present, that is about the year 1830, and first let us visit our Gallic neighbours. The splendid discoveries of Laennec with regard to the stethoscope, and the morbid or abnormal sounds produced by streams of air passing through or over diseased structures, were not long in being laid hold of as a means of diagnosis by those of his countrymen who had devoted their talents and energies to the investigation and treatment of diseases of the ear. Foremost among these stood Deleau, and next to him Itard; the works of the former were the first to introduce into general practice in Europe the introduction of various medicated vapours, as well as fluid injections, into the middle ear, by means of catheterism of the Eustachian tube, a practice since so successfully employed by Dr. Kramer of Berlin. But it should not be forgotten that si-



milar means were employed in England nearly a hundred years ago by Cleland and Wathan. The labours of Itard are principally worthy of support, from the clearness and perspicuity of his views, and from his vast experience in treating the inflammatory diseases of the external and middle ears, yet his work is by no means devoid of those prejudices and nonsensical superstitions which, even to the present day, like the amulets of a by-past age, still hang upon or surround the works of aural surgeons.

We now pass over a long lapse of years, owing as much to the brevity necessary in this paper, as to the paucity of writers in that period, and turn again to Germany, where we find aural surgery in the highest condition of any country in Europe. As the space allotted to an article of this description is necessarily limited, I must compress my observations within the limits of two works, those of Lincke and Kramer. The former never having been translated into the language of this country, few of my readers can have had an opportunity of being acquainted with its merits; I shall only say for it, that although it contains but few original observations, and is, perhaps, rather prolix in its literary analysis, yet it comprises all that was known upon the subject of aural surgery at the time in which it was written, in 1840. Another industrious compiler is Doctor Schmalz of Dresden, whose work on the Deaf and Dumb is one of the very best in print. To Doctor Kramer of Berlin we are indebted for the best treatise that has yet appeared upon this intricate and hitherto neglected branch of the healing art. I rejoice to say his work has been translated into English, and although I differ from him in his classification, and also on some pathological questions, still I am bound to say it is the best work upon the subject which it professes to teach, which has yet appeared in British print. Independent of the general value and truthful observation of this work, it also put forward some important discoveries in acoustic medicine. One of these is that of the air-press, for the purpose of more accurately intro-

ducing atmospheric air through the Eustachian tube into the middle ear, and also the introduction of certain gaseous substances, as, for instance, the vapour of æther into the middle ear for the removal of one of the most incurable maladies—nervous deafness. As a means of diagnosing the condition of the tube and middle ear, it is, and ever will be, highly valuable, nay, in many cases it is indispensable ; but I must confess, that although I have used it very extensively for the last three years, I have not had experience of the same beneficial results from the introduction of ætherous vapour, as the tuition, or the work of my friend led me to expect ; in fact the cases in which it is applicable are comparatively very rare.

Kramer's discoveries, and his most scientific work, seem to have excited a new taste for aural surgery in Great Britain ; and well educated surgeons and honest men have at last come forward to rescue this branch of the healing art from the hands of quacks and charlatans. The names of Mr. Pilcher, Mr. Wharton Jones, Mr. Toynbee, and Mr. Williams, are now a sufficient guarantee that the empiric and the nostrum-monger will soon be driven from the field. And yet that many of those latter still drive a thriving trade, may be learned from the puffs and praises bestowed upon them in several of the literary periodicals of the day. In one of these, which, from our own knowledge of the honour and integrity of its editors, as well as its hitherto stern and uncompromising stand against quackery of every description, and its high reputation for honesty of purpose and substantial literary merit, we really expected better things, it is not only asserted, but endeavoured to be proved, that by dropping "an alkaloid" into the external meatus, or rubbing the surface of the membrana tympani with it, persons born deaf and dumb have been almost instantaneously cured ! nay, not only is hearing restored on the moment, but the miracle (for miracle it certainly is, if true) extends to the organs of speech also, as in one case, and that too given on the faith of a medical man, and conveyed in a letter to the operator ; he says, that "after

repeated examinations of many of the objects under your care, previously to any thing being done, I satisfied myself that they were both deaf and dumb. I have witnessed the application of your remedy to the ears, and bear testimony to them having in my presence obtained the sense of hearing." But—miracle upon miracle—the faculty of speech to one who had never heard the sweet sounds of a human voice, follows almost as matter of course; for, adds the narrator, "and by my own tuition, in *a few minutes afterwards acquired the power of speech!*" Query—was it broad Scotch they spoke?

It is always a matter of difficulty to argue on a medical or legal subject with a non-professional person, for it is quite impossible (especially with respect to medicine) for a person uninstructed in anatomy and physiology, medicine and surgery, &c., to be convinced of his error, any more than it is for him to form an opinion of the merits of a cure or the causes of a failure. How few students, after two or even three years' study in the preparatory and elementary courses, would be capable of estimating the value of any medical production put into their hands, and yet "in order to ascertain in what respects Doctor Turnbull's practice differed from that which is general in the profession," we are gravely informed by the editors of the *Edinburgh Journal*, that they "*studied* the most recent and approved works on aural surgery." Such discussions with non-medical persons should be avoided as much as possible, they tend to no good, and were it not our conviction that Mr. Chambers, for whom we entertain the highest respect, has been made the dupe of Dr. Turnbull, we would not have alluded to the subject. Had the Editor known anything of the structure of the parts he is attempting to describe, he would have been better informed than to publish an account of an analogy between the ceruminous glands in the external meatus, and the mammary gland in the female; for in the article to which we allude he says: "Finding *cured* persons relapse in consequence



of the defect of wax, Dr. Turnbull was prompted to use his ingenuity in endeavouring to discover a means of sustaining that secretion. He *reflected* that the application of the mouth of the child to its mother's breast, by removing the pressure of the atmosphere, causes the milk immediately to flow, and he conceived that a similar result might follow with respect to the wax of the ears, if he could by any means remove the pressure of the atmosphere from the *external parts*. For this purpose, he at first used a syringe with an Indian rubber mouth exactly fitted to the aperture of the ear." Now the veriest tyro in medicine knows that it does not depend on any atmospheric pressure, but is owing to a morbid action in these follicles themselves that the ear-wax is not *secreted*. In fact they are, if there be any analogy at all in the case, in something of the same condition that the flow of milk, and the mammary gland are in, in females not giving suck. But as we fear we would not be understood, we cannot stop to explain to this non-medical editor the difference between the functions and processes of *secretion* and *excretion*. Would any other but a non-medical person be absurd enough to suppose that the application of an exhaustor to the nipple would produce a secretion of milk : or cause a flow of milk, unless such had been already secreted in the lactiferous tubes? But yet we read—"the plan was successful ;" and the reason assigned is, because "the blood-vessels resumed a free circulation, and the flow of wax recommenced."

Again, we learn that "the clearing of the Eustachian tube, for which no means formerly existed but the *application* of medicine to the bowels, or the *dangerous* use of a catheter, was affected by Dr. Turnbull by the same simple means." Well may the friends and admirers of the Russell-square professor employ the term *dangerous*, for the only record of any accident or ill effect having arisen from the employment of this exceedingly simple and harmless operation, occurred to Dr. Turnbull himself, two of whose patients, in the year 1839, fell victims to

the operation of catheterism of the Eustachian tube, and on both of whom coroner's inquests were held. One of these, it appeared in evidence, was, almost immediately after the operation, attacked with emphysema of the throat and inflammation of the brain, of which he died in a week ; and the other, a lad, named Joseph Hall, aged 18, and in perfect health, "fell back in the chair apparently lifeless, and never spoke afterwards."\* In the first of these cases it appears most likely that the emphysema was caused by the instrument rupturing and tearing the mucous membrane ; and in the second, in all probability, the death was caused by the shock or concussion given to the base of the skull by the volume of compressed air,—for where the mouth of the catheter was we know not. After this it seems the Doctor changed his hand, and finding that it was rather a "*dangerous*" experiment to "blow up" his patients, determined to *suck* them as much as possible ; and, in order to effect this, Mr. Chambers informs us, that by means of an air-pump, in connexion with a small glass tube, "introduced into the mouth of the patient," and consequently behind and above the soft palate ! "and applied to the orifice of the Eustachian passage, communication is opened between the previously rarified air in the receiver and the orifice, from which a discharge of mucus is *soon made* into the tube, which is then withdrawn." But we cannot discuss further those matters with a person who speaks of the "vibrations of the *tympanum* !" With one word more let us dismiss this subject of Dr. Turnbull and his review ;—a word worthy of consideration to those who may be induced by the article†, to which we allude, to submit their *deaf mute* friends or relatives to useless pain and profitless experiment. It is this:—Were the miraculous cures of the Saviour performed on cases or diseases that art, either then or now, could have remedied ?—could remedial agents, or man's interference, have raised the

\* Lancet, July 6, 1839.

† See Chambers' Journal, No. 519.

dead—thrown instantaneously the vigour of youth, and the health and strength of manhood, into the limbs of the cripple—given power to the parylitic—steadiness to the palsied—and calmness to the possessed ; or have cooled the fevered—given sight to the blind—speech to the dumb, and hearing to the deaf?—If, without the special interference of Providence, these individuals could have been cured, then, in my humble opinion, they were not miracles ; but if without the pale of art, or beyond the power of human means, then were they miracles, and cannot now be performed but by similar means. That, however, the age of miracles is again at hand, Mr. Chambers appears to have some idea, for, no doubt aware of the instantaneous restoration of speech and hearing to the deaf mute being one of the miracles assigned to Christ, he concludes by saying : “ ‘ Every thing but trodden out of existence,’ is, in one word, the fate of the individual who has been the first *merely human* being to cause the deaf to hear.” But why discuss a question arising out of an assertion as to the possibility of perfectly and instantaneously restoring to speech and hearing the congenital deaf mute, which all sober-minded men in the community, save and except the Doctor and his reviewers, deny ?

Let us, in conclusion, inquire what the legitimate aural practitioner in the present day is, and how far his art extends over the regions of disease. First, a practitioner in aural surgery, or, if it pleases the public to call him an Aurist, in our day must, or at least ought to be, in the first instance, a well-educated surgeon and physician, instructed in anatomy, physiology, chemistry, materia medica, and the other elementary branches of the healing art, who applies the recognized principles of medicine and surgery to the diseases and abnormal conditions of the organs of hearing, in the same manner as the modern ophthalmic surgeon does to the diseases of the eye. With regard to the second proposition, of how far our art extends over the regions of disease—we daily hear and read, and



it has been reiterated from mouth to mouth, and copied from work to work, that the treatment of diseases of the ear is an opprobrium to the healing art, and without the pale of human knowledge. To this objection against our art it may fairly be urged, that notwithstanding the injudicious treatment prescribed by quacks and nostrum-mongers; and, as in many instances, we know it is, the total abandonment of all treatment by the general practitioner, still were the statistics of all our diseases carefully collected, it would be found that there were among them as many curable cases of affections of the ear, as there are among the severer maladies of the eye, or among diseases of the chest, the brain, the liver, or any other organ, the treatment of which falls to the lot of either the physician or surgeon. It must, however, be admitted, that up to a very recent period, this question of —“ what can you do for deafness ?” might have been asked with great justice, because, from the circumstance of well-educated medical men in this country either considering it beneath their station or acquirements to treat so insignificant an organ specially, or not finding in the direct cultivation of aural surgery a sufficient remuneration for their time and talents, this branch of the healing art has remained in that state in which ophthalmic surgery was half a century ago—in the hands of charlatans and mountebanks. All this, added to the smaller share of sympathy afforded to the deaf than the blind, and to the circumstance of impairment of hearing interfering less with man’s means of subsistence, and also to the fact that it is much more easy to pawn cures of deafness than cures of blindness upon the general public; besides the greater difficulty of minutely examining, either during life or after death, the accurate condition of, or the morbid changes which occur in the middle and internal ear, serve to account for why aural pathology and aural surgery have not kept pace with the other rapid improvements in medical science, and why so few works worth reading have been as yet written on the subject. Above all, the well-instructed

aurist of our time possesses a knowledge and a power which is not general among the Profession—of making an accurate diagnosis, which, when given with honesty, will frequently save the patient much anxiety, loss of time and money, and often much unnecessary suffering.

I offer the accompanying nosological arrangement of diseases of the ear, defective as I know it is, more for the purpose of eliciting inquiry, and as a basis for future investigations, than as possessing any great merit of its own.

To the difficulties attending all synoptical arrangements, we have here to encounter additional ones, arising from the obscurity of the parts affected, and the absence of definite pathological knowledge with regard to many of the diseases of the organs of hearing. And whether we attempt a classification, according to the symptoms, as the means employed by Cullen and Mason Good,—or whether it is based upon the pathology and morbid anatomy of the tissues affected, as made use of by our modern nosologists, the same difficulties beset us.

The first chart of aural diseases worth mentioning is that arranged by Galen. It consists of five affections, viz. : *otalgia*, *baruckoia*, *kophotis*, *parakousis*, and *parakousmata* ; but these it is perfectly evident, were but symptoms, not diseases, and to these he added, pain in the ear from cold, inflammation, and “*ex flatulento spiritu aut crassis et viscosis humoribus est ex serosis et saniosis humoribus.*”

The first attempt at an arranged nomenclature of aural diseases in Great Britain was that by Buchanan in 1825, who, in his “Illustrations of acoustic Surgery,” endeavoured to classify those affections according to the parts affected, but his diseases are mere symptoms. It consists of three orders, twelve genera, and thirty-three varieties ; that, however, this division is most imperfect, nay, in some respects positively absurd, may be learned by an examination of his fourth genus alone, styled, “*Impedimentum Externum*,” or obstruction of the external meatus, under which

he enumerates four species, each resulting from causes totally different, and quite unconnected with one another, viz.: “*Impedimentum Extraneum*, from extraneous substances; *Impedimentum Induratum*, from indurated wax; *Impedimentum Polyposum*, from polypi; and *Impedimentum Excrescens*, from excrescences!”

Kramer seems to follow this classification in some respects, in his division of the diseases of the external, middle, and internal ear; but this method had been long before attempted by Du Verney. Kramer makes seven sections, viz.: diseases of the auricle, of the external meatus, and of the membrana tympani; inflammation of the mucous membrane, of the cellular tissue, and periosteum of the middle ear; and two forms of nervous deafness, the erethitic and the torpid. The inflammations, which are those diseases on which his work principally treats, he divides into those affecting the various tissues, as the cellular, the mucous, and the fibrous; but there are many, and very formidable diseases too, on which he is perfectly silent.

Mr. Wharton Jones’s arrangement\* is entirely an anatomical one, consisting of two parts, viz.: the diseases of the accessory organs of the apparatus of hearing,—and the diseases of the fundamental organ of hearing, ear-bulb, or labyrinth, with the minute sub-divisions of both these portions.

Mr. Williams does not attempt any classification whatever, and Mr. Pilcher’s work is likewise defective in this respect; his arrangement, if such it can be termed, being a simple enumeration of aural affections, divided into, the abnormal conditions or malformations; otitis, or acute inflammations; chronic diseases of the ear; and nervous diseases of the ear.

Lincke is by far the best modern classifier; he makes three divisions—first, inflammations of the organs of hearing; second, affections caused by solution of continuity; and third, affections

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\* See Article “Ear and Hearing, Diseases of,” in the *Cyclopædia of Surgery*, part ix.



caused by cohesion of parts; but he does not classify the diseases of the sentient portion of the auditory apparatus, or nervous deafness. We hope to see a third volume from this author on these most obscure forms of disease.

I have retained the original terms in order to preserve a tabular arrangement which I have here attempted. His first division contains two sections, the simple and the complicated, and the former is again subdivided according to the locality, as:

## FIRST DIVISION.

*Inflammations of the Organs of Hearing.*SEC. I.—*Simple.*SEC. II.—*Complicated and specific.*

<i>Outer Ear.</i> “ Attritus Auriculæ.	Otitis, Erysipelatosa.
Erythema Auriculæ.	„ Catarrhalis.
Inflammatiô Auriculæ Phlegmonosa.	„ Gonorrhœica.
Pernio Auriculæ, a frigore.	„ Rheumatica.
Inflammatiô Meatus Auditorii.	„ Arthritica, s. Otagra.
Inflammatiô Membrana Tympani (Myringitis).	„ Scrophulosa.
	„ Syphilitica.
	„ Morbillosa.
	„ Scarlatinosa.
<i>Middle Ear.</i> Otitis Universalis s. interna totalis.	„ Variolosa.
Inflammatiô Tubæ Eustachianæ (Syringitis).	„ Eczematica s. Crusta Lactea.
	„ Herpetica.

## SECOND DIVISION.

*Affections caused by Solutions of Continuity.*

- “ Contusio Auriculæ.
- Vulnera Auriculæ.
- Fractura Auriculæ.
- Vulnera Membrana Tympani.
- Vulnera Totalis Auris.
- Coloboma Auriculæ.
- Foramina Membranæ Tympani.

NOSOLOGICAL TABLE OF THE DISEASES OF THE EAR.

DISEASES OF THE AURICLE  
AND MASTOID PROCESS.

WOUNDS AND INJURIES, . . . . .	{ Incised. Lacerated. Contused—Fractured.
ALTERATION FROM PRESSURE, . . . . .	{ Flattening. Sloughing.
INFLAMMATION, . . . . .	{ Phlegmonous. Erysipelatous. Furuncular. Frost bitten.—Chilblain. Specific—Gouty.
AFFECTIONS OF THE SKIN, . . . . .	{ Herpes. Eczema. Pemphigus.
HYPERTROPHY. CANCER.	
TUMOURS, . . . . .	{ Encysted. Steatomatous.
SYPHILITIC ULCERATION. NÆVUS.	
MASTOID PROCESS, {	{ INFLAM. OF PERIOSTEUM. OF MASTOID GLAND. CHRONIC ABSCESS ON. CARIES.
CONGENITAL MALFORMATION, . . . . .	{ Imperfect Development. Auricle wanting. —— double. —— cleft.
WOUNDS AND INJURIES. FOREIGN BODIES IN.	
ALTERATION IN TUBE, . . . . .	{ Collapse. Stricture. Dilatation.
INFLAMMATION, . . . . .	{ Acute, . . . . . { Circumscribed. Chronic. { Diffuse. Rheumatic. Glandular. Specific—Gonorrhœal.
AFFECTIONS OF THE SKIN, . . . . .	{ Herpes. Thickening of Cuticle. Morbid Growth of Cuticle. Aphthous Ulcers.
MYRINGITIS.	
OTORRHOEA EXTERNA, . . . . .	{ Catarrhal. Simple purulent. With Polypus or fungous Growths. —— Granular Membrana Tympani. —— Caries. —— Perforate Membrana Tympani. —— External Fistula.
MORBID GROWTHS, . . . . .	{ Polypus. Bony Tumours.
DISEASES OF CERUMINOUS GLANDS, . . . . .	{ Cerumen, increase of. . . . { Acute. —— deficiency of. { Chronic. —— alteration of.
ULCERATION.	
CONGENITAL MALFORMATION, . . . . .	{ Polypous Excrecence in. Closed by false Membrane. Meatus wanting. —— contracted.

DISEASES OF THE EXTERNAL  
MEATUS.

DISEASES OF THE  
MIDDLE EAR  
AND  
EUSTACHIAN TUBE.

MEMBRANE OF TYMPANUM. . . . .	{ MECHANICAL INJURY. INFLAMMATION, . . . . . { Acute, . . . . . { Circumscribed—Abscess. Chronic. { Diffuse. With Granulations. OPACITY. COLLAPSE, WITH SHORT HEARING. LOSS OF VIBRATION. PERFORATION. ULCERATION. MORBID DEPOSITS IN. CONGENITAL MALFORMATION, { Mem. Tym. wanting. —— covered by a false Membrane.
CAVITY OF TYMPANUM. . . . .	{ INJURIES OF. INFLAMMATION, . . . . . { Acute. Catarrhal. Rheumatic. Chronic. With thickening of mucous Membrane. INFLAMMATION OF MASTOID CELLS. OTORRHOEA INTERNA, . . . . { Specific. Simple. With morbid growths. —— Caries of internal Ear. —— Meningitis or Cerebritis. MORBID GROWTHS, . . . . { Polypus. Fungus. Osteosarcoma. Ossification of Fenestræ. INCREASED MUCOUS SECRETION IN. EXTRAVASATION OF BLOOD IN. LOSS OF THE OSSICULA. ANCHYLOSIS OF OSSICULA. CONGENITAL MALFORMATION { Ossicula wanting. Fenestræ wanting.
EUSTACHIAN TUBE. . . . .	{ INFLAMMATION, . . . . . { Catarrhal. Syphilitic. Chronic, with thickening of mucous Membrane. OBSTRUCTION—FROM . . . { Stricture. Mucus. Enlarged Tonsils. Thickened and relaxed Membrane. DILATATION OF. FOREIGN BODIES IN. CONGENITAL MALFORMATION, { Tube wanting. —— imperfect.
DISEASES OF THE INTERNAL EAR. . . . .	{ MECHANICAL INJURY, . . . Fracture of petrous portion of temporal bone. INFLAMMATION. NERVOUS DEAFNESS, . . . { Erethitic form. Torpid form. From cerebral Disease. —— Mercury. Otalgia, from disease of acoustic Nerves. FUNGUS HÆMATODES. OSTEOSARCOMA. CARIES. CONGENITAL MALFORMATION { Auditory Nerves atrophied or wanting. Labyrinth deficient, . . . { Partial. Total. Labyrinth filled with caseous Matter. DEAF DUMBNESS . . . . { With congenital Malformation. Without apparent Defect.





THIRD DIVISION.

*Affections caused by Cohesion of Parts.*

- “ Dilatatio Meatus Auditorii.
- Structura Meatus Auditorii.
- Compressio s. Thlipsis Meat. Aud.
- Collapsus Meatus Auditorii.
- Atresia s. Obliteratio Meat. Aud.
- Dilatatio tubæ Eustachii.
- Strictura tubæ Eustachii.
- Obturatio tubæ Eustachii.
- Collapsus tubæ Eustachii.
- Obliteratio tubæ Eustachii.
- Imperforatio tubæ Eustachii.
- Aneurisma et Varix Auriculæ.
- Cirsomyringa.”\*

I am indebted to this enumeration of Lincke's for the first account of some of the diseases I have introduced into the accompanying Nosological Table ; yet, with few exceptions, they have all passed under my own observation, and I have not admitted any but upon my own personal knowledge, or on authority of undoubted veracity. To enter minutely into the description of this chart, or the position given to each disease in it, would be trenching on a subject not intended to be included in this essay. In fact it explains itself. The nomenclature, as far as it was possible, has been reduced to English, except in such terms as “hypertrophy” and “nævus,” &c. The term Myringitis is employed to signify inflammation of the external layer of the membrana tympani, and is therefore placed among the affections of the external meatus. The description of the rarer forms of aural disease, as those now, for the first time, brought before the professional public, I must reserve for another opportunity.

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\* Handbuch der theoretischen und practischen Ohrenheilkunde,—von Dr. Carl Gustav Lincke. Zweiter Band. Die Nosologie und Therapie der Ohrenkrankheiten. Leipzig, 1840.

It may appear strange that *tinnitus aurium*, or noise in the ear, is not enumerated among the affections specified in this classification ; but I have long since convinced myself that it is but a symptom, and not a special disease ; and so variable an attendant is it, that like *muscæ volitantes* in the eye, which it very much resembles, we cannot, as yet, accurately determine what are the particular morbid states which is symptomatic of it, or accompanies. The value of *tinnitus aurium*, as a means of diagnosing diseases of the brain and diseases of the ear, as well as the peculiarity of the sensations accompanying certain morbid conditions of these organs, would form a very valuable addition to our pathological knowledge.

## BIBLIOGRAPHIC NOTICES.

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*Remarks on the Use of Vivisection as a Means of scientific Research ; in a Letter addressed to the Earl of Caernarvon, President of the Society for preventing Cruelty to Animals.*  
By RICHARD JAMESON. 1844. Pamphlet.

THIS is a very clever letter, defending the expediency of performing experiments on living animals to elucidate physiology and surgery, and to improve the manual dexterity of the surgical operator. It was written in consequence of the Society for the Prevention of Cruelty to Animals having passed a severe censure on those members of the Profession who had performed experiments on live animals. We cannot wonder, where the utility of the end is often so obscure, that the casual observer should view with disgust and abhorrence the mutilations which the practised physiological investigator performs, with such apparent *sang froid*, on animals that have such claims on our sympathies—as the faithful dog or the noble horse—when, even to those who see clearly the end and aim of those slicings of the brain, those prickings of the nerves, those incisions down to lungs, heart, or intestines, the sight is repugnant, and the science of medicine appears in a garb far from attractive, when it demands the sacrifice of such hecatombs of poor, inoffensive brutes, by means which would appear to the uninitiated wanton devices of cruelty to increase the natural pain attending dissolution, by wounds short of death, by tearings and breakings of limbs, by starvation, or the exhibition of deleterious food, and by the excruciating tortures of poison. But most men of science will allow that medicine has been materially benefited by experiments on living animals, and that Cooper, Harvey, Haller, Hunter, and others have arrived at important truths by such means, unattainable by any other. But while we allow this, and fully agree with Mr. Jameson, that bad as the means may seemingly be, they are often fully justified by the aim to be attained, we cannot but feel, that, in Paris especially, it has been overdone, and that the return has not been commensurate with the outlay



of animal suffering and animal life. And though the Society for the Prevention of Cruelty to Animals have gone rather far, as most enthusiasts do, yet as enthusiasm generally obtains some portion of its object, so this Society will doubtless have some effect in making the ignorant pause before they cut.

Mr. Jameson is a very hard hitter, and we think our readers will not fail to be amused with the manner in which he handles the Rev. Mr. Styles. With regard to the great exaggeration of the number of experiments performed on living animals, he says :

“Foremost in the list of exaggerators, I must place the Rev. John Styles, D. D. He is the author of an Essay which gained a prize of £100, as being *the best out of thirty-four* papers sent into the Committee of your Society, and may, therefore, fairly be regarded as the chosen champion of its cause; I shall bestow as much space as the limits of this letter will allow, in exposing some of his most glaring misrepresentations. But few words are necessary to do this, for the statements refute themselves by their very absurdity.

“He informs the public, ‘that every surgeon’s apprentice thinks himself entitled to find his way into the arcana of nature, by scalping cats and rabbits to see where their brains lie.’ ‘The transactions,’ he adds, ‘of the college of the medical craft in this sense would convict them before a convocation of Ashantees.’ Very likely—and why? Because the Ashantees, like Dr. Styles himself, are unable, from ignorance of physiology, to appreciate the end for which vivisections are employed. Supposing that the Ashantees *would* be shocked at experiments on living animals, how much more horrible would they think a surgical operation performed on one of themselves! What needless cruelty to wrench a fine firm tooth out of a poor child’s jaw; or stab him in the arm with a poisoned weapon; or make a gash in the thigh of a man who has only a little swelling behind his knee; or, when a person has been stunned by a fall, what wanton barbarity to cut his scalp and saw off a piece of his skull! ‘How could such cruel experiments answer any good end?’ would be the wise remark of some Ashantee Doctor of Divinity.

“Where Dr. Styles collected his information about the ‘surgeon’s apprentices’ I know not, but it looks exceedingly like a hoax practised on his credulity by some waggish student, who thought to satisfy the Doctor’s love of the marvellous, by telling him horrible stories of ‘what they did at the hospital.’ I will give one or two proofs how excessive his credulity is. He gravely asserts, that ‘oxen are compelled to travel *for many days* without food, *their hoofs worn off, and on bleeding stumps.*’ He might just as well have said at once, ‘with their *heads* worn off.’ The only instance at all parallel to this of the hoofs, is to be found in the ‘Surprising Life and Adventures of Baron Munchausen.’ He had a famous greyhound that ran till he wore his legs away, but was not useless even then, for being a staunch dog, says the Baron, he made a capital pointer.

"Again at page 128, we are told that 'the hippopotamus or river-horse, which, when overcharged with too great a quantity of blood, strikes himself against the point of a sharp reed until he has bled sufficiently, and then rolls into a particular kind of mud until the bleeding is staunched, supplied the ancients with the original idea of phlebotomy.' An animal whose hide is proof against a bullet, bleeding itself with the point of a reed!!

"But not content with single absurdities of this kind, the Doctor groups into one sentence a whole cluster of them. Speaking of the small amount of pain inflicted by prædacious animals upon others, he says: 'they obey an instinct which destroys the life of their victims at the least possible expense of pain. It is usually in the night-time and in the hour of sleep that they sink under the fangs of their destroyers; twenty strokes sent home in one instant to the sources of life afford no time to reflect that they are about to lose it.' If Dr. Styles had studied the animal creation before writing about it, or if he had kept his eyes employed as he walked in the fields, or even if he had only sat by the fireside and watched his cat, he never would have written such nonsense as this. Do hawks and kites kill sleeping birds, or foxes sleeping rabbits, or swallows sleeping insects, or do spiders subsist upon somnambulent flies? Had the Doctor's cat depended for her sustenance upon sleeping mice, who, while in that state, are always in their holes, she would have fared but poorly. And when she does catch a mouse, is its life destroyed 'at the least possible expense of pain?'

"But one of the Doctor's greatest exaggerations, and one which most appropriately belongs to this the first division of my subject, relates to the *number* of animals experimented upon. Not only does 'every surgeon's apprentice' think himself entitled to destroy them, but 'in this country many thousands of animals of all descriptions, from the worn-out horses and asses regularly bought for the purpose, to the most minute insect, are dissected alive.' This is a very vague way of talking: it is easy to say—'many thousands;' but I do not believe that *one* thousand animals, large and small, are used for vivisection in the course of the year throughout Great Britain. But as the Doctor is so fond of great numbers, I will just remind him that King Solomon, his pattern of humanity, killed *in one day* twenty-two thousand oxen, and as many sheep. These animals, it will be said, were killed to the glory of God. And, I ask, do not the discoveries of physiology advance his glory?"

Mr. Jameson gives a slight cut or two at Mr. Drummond, whom, however, he lets off rather easily, as he also does Mr. James Macauley, another essayist on cruelty to animals. This last writer derives his chief strength from numerous quotations from the Scriptures; and we shall see by the following quotations how Mr. Jameson disposes of him and King David at the same time:

"It is remarkable that among the numerous passages which Mr.



Macauley cites from the writings of King David, there is not *a single precept\** which enjoins humanity to brutes! All the quotations from the Psalms are descriptive either of God's power over the animal creation, or of the cruelty of men towards each other.

He demonstrates the incorrectness of the popular notion of the sensibility of insects:

"See a child catch a 'daddy-long-legs;' the insect escapes by leaving a leg or two in his pursuer's grasp; and an instant after observe the mutilated animal feeding as quietly as if nothing had taken place. The ichneumon fly deposits her eggs in the body of a living caterpillar: the young are hatched there, and the caterpillar continues to feed uninterruptedly while the intruders are actually devouring its living tissues."

"To ascend from insects to animals whose nervous system is more completely developed—to birds and quadrupeds. Here, no doubt, as they are subject to fewer casualties, and are furnished with more perfect means of escape, we find an increased susceptibility of pain. But how absurd to pretend, even in these creatures, that the pain resulting from surgical operations is as great as in man! How trifling comparatively is the mere physical pain of an amputation to that caused by the anticipation of it, or by the consideration of its results! Contrast the situation of an idiot who has lost a hand, with that of a surgeon or an artist similarly mutilated. Would Raffaele or Michael Angelo, or any other great painter, have grieved over the mere severing of so many inches of bone and sinew; or would not the feeling that from henceforth all his glorious conceptions—all the visions of grandeur and beauty on which he had mused for years—must fade away for want of the power to embody them, have caused a pang infinitely more severe than any bodily torture? What would have been the state of mind of John Hunter, brooding over a vast system of physiology, and trusting to his industry and manual skill to work out and prove all his theories, if compelled to lose his right hand? The idiot and the brute no doubt suffer from wounds, or from the various causes which may bring about their death, but, as Dr. Styles observes (and for once he is right), 'that fatal moment is not embittered to them by any of the feelings which render it so painful to most of the human race, regret for the past and solicitude about futurity. They feel the pang of nature but not of mind.'"

Mr. Jameson then exposes the popular fallacy of most of the writers of the Society, that wounds of the brain are painful,

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\* "The *practice* of this monarch was notoriously the very reverse of humane. When he conquered the Syrians, he 'houghed all the chariot horses.' (2 Sam. viii. 4.) Nor was he less cruel to his human captives: 'Whosoever getteth up to the gutter and smiteth the Jebusites, and the lame and the blind, that are hated of David's soul, he shall be chief and captain.' (2 Sam. v. 8.) 'And he brought out the people that were in it (Rabbah) and cut them with saws, and with harrows of iron, and with axes.' " (1 Chron. xx. 3.)



and mentions a case related by Sir C. Bell, where after a pistol ball had passed through a man's head, he could enter the fingers deep into the anterior lobe, without the patient complaining of anything but of the integument. But is not this integument always more or less extensively divided, particularly in experiments on the cerebellum? The truth is, perhaps most of the experiments on animals are necessarily attended with much suffering to the poor brutes, those by poison especially so; we look, therefore, on this ground of argument, adopted by Mr. Jameson, as very weak; it is much preferable to allow that much pain and misery are inflicted in the great majority of cases, and to rest their apology on the only true ground of defence, that of the great benefits afforded by them to mankind.

Let us see how he treats another of the writers opposed to vivisections :

“ A paper-war on the subject of vivisection has, I perceive, been carried on for some time in the pages of the London Medical Gazette. Among the most violent of the anti-vivisectionists is a Dr. Hull, who deals about his blows with the blind fury of a raw recruit, rather than the steady skill of an old soldier. He calls those who make physiological experiments by some very hard names; they are ‘diabolical,’ ‘savage,’ ‘infernal,’ ‘damnable;’ and he quotes as a great authority a Mr. Mac something, ‘a surgeon of operative and literary fame, who has been long impressed with the inutility of vivisections.’ Neither the fame of Dr. Hull, nor of his friend, has yet reached the city where I am now writing, and I must be excused for the present if I prefer to either of these gentlemen's opinions, those of Harvey, Haller, Hunter, Bell, Dupuytren, Cooper, Orfila, and Hope, who have all declared (and proved) that vivisection was absolutely necessary to enable them to attain the important objects of their research. Another in the Medical Gazette recently quoted a number of the Idler against vivisection, as if the opinion of Dr. Johnson could be of the smallest weight on the subject of which he was utterly ignorant. The following are some of the passages quoted :

“ ‘ Among the inferior professors of medical knowledge is a race of wretches, whose lives are only varied by varieties of cruelty, whose favourite amusement is to nail dogs to tables and open them alive; to try how long life may be continued in various degrees of mutilation, or with the excision or laceration of vital parts; to examine whether burning irons are felt more acutely by the bone or tendon; and whether the more lasting agonies are produced by poison forced into the mouth or injected by the veins’ . . . ‘ he that burned an animal with irons yesterday, will be willing to amuse himself by burning another to-morrow.’

“ Here we observe the common fallacy of unscientific writers on the subject of vivisection—that those who practise it do so ‘for amusement!’ Of course any persons who could derive the slightest gratification from inflicting pain, either on their fellow-men or on

the lower animals, would be most justly stigmatized as 'wretches:' but where are such monsters of absurdity to be found amongst medical men? At the very time that Johnson, like a 'good hater' as he was, composed the 17th No. of the *Idler*, Haller (at least as good, as conscientious, and as pious a man as Johnson himself, and certainly not one of 'the inferior professors of medical knowledge') was engaged in a series of experiments on living animals, perhaps the most extensive that has been ever performed; and was laying the foundation of that system of patient investigation and impartial research which has produced such important results, and has raised medicine from rude guess-work to the rank of philosophy.

"I revere the memory of Dr. Johnson, but I do not love his faults; nor can all my admiration of his independent character, his noble self-reliance, his unflinching integrity, and honest warmth of heart, make me forget that he was of all bigots the most prejudiced, of all controversialists the most obstinate and virulent."

In favour of his favourite position, Mr. Jameson next goes on to prove that some of the most extensive experimenters on animals were men of undoubted piety, as Haller, Robert Boyle, Rev. Stephen Hales, Dr. Durham, and the famous Boerhave, "a firm believer in the revelations of Christianity," and lastly Dr. Hope.

"I wish as much as your Lordship or any member of your Society that there were no such thing as pain in the world; but we must take the world as we find it, with its good and its evil, its pain and its pleasure, its joy and its sorrow, endlessly mingled and alternating. A golden age such as Dr. Styles describes, in which beasts of prey and the weaker animals lived together in harmony, could no more have had an actual existence than those 'impenetrable scales' with which his liberal imagination has encased the whale.

"We judge of God's will by his works. What we see done we conclude he willed to be done. Now if we contemplate his works in Nature, we see a never-ending process of destruction and reproduction of life going on, the former frequently attended by *pain*. Whether we regard the great destroyer man, incessantly taking away the life of other creatures to support his own, or the beasts of prey roaming the desert and the forest, or the countless tribes of fishes devouring those weaker than themselves; or when, as the insect tribes escape our search by their minuteness, we aid our sight with the microscope, and see that the very film that floats on the stagnant pool is one scene of slaughter and devastation; whichever way, in short, we turn our eyes, we must be convinced that the amount of pain in the world is great beyond calculation.

"What is it that reconciles us to all this but a conviction that it is necessary? and that this seemingly wanton waste of life is, in reality, a most wonderful provision for preserving organic matter within the limits of the animal kingdom, and thereby economizing, as it were, Nature's strength and resources? This is well stated by Pro-



fessor Owen in his recently published Lectures on Comparative Anatomy, where he speaks of the important office which the infusoria perform 'in preventing the gradual diminution of the present amount of organized matter upon the earth. For when this matter is dissolved or suspended in water, in that state of decay which immediately precedes its final decomposition into its elementary gases, and its consequent return from the organic into the inorganic world, these wakeful members of nature's invisible police are every where ready to arrest the fugitive organized particles, and turn them back into the ascending stream of animal life. Having converted the dead and decomposing particles into their own living tissues, they themselves become the food of larger Infusoria, as the Rotifera, and of numerous other small animals, as fishes; and thus a pabulum, fit for the nourishment of the highest organized beings, is brought back by a short route from the extremity of the realms of organized matter.'"

The next argument Mr. Jameson expands upon is the degree of necessity which exists for these vivisections, to acquire or impart knowledge. The first example is that of Hunter, who performed numerous experiments on dogs before he ventured to perform the operation for the popliteal aneurism, now generally used, viz., tying the vessel at a distance from the tumour. Sir Astley Cooper also, before tying the aorta in man, operated several times on dogs, he also ascertained by numerous experiments on animals, the exact process of union in broken bones, and the causes which principally retard it.

"I have yet to notice another illustrious example of talent and industry, who has employed vivisection to a greater extent than perhaps any of his contemporaries: I mean Professor Orfila. The objects which he, and others who laboured in the same field, had in view were these:

"1st. By carefully and repeatedly observing the effects of poisons on living bodies, to ascertain with precision what organ or set of organs were specially affected by certain substances:

"2ndly. To determine what antidotes would best counteract such poisons, and how these antidotes could be most efficiently administered:

"3rdly. To apply the knowledge thus obtained to cases where death might occur under suspicious circumstances; and to ascertain, by *post mortem* examinations, and the use of chemical tests, whether poison had been administered, and, if so, what the nature of the poison had been: points of the utmost possible importance in a legal inquiry, as involving the life of a fellow-creature who may have been falsely accused of murder.

"I bring forward experiments of this kind the more readily, as they determine at once the question of the lawfulness of vivisection, by proving that the end for which they were instituted was a great and important good, and attainable by no other means. These ex-



periments were nearly all painful, many acutely so, and lingering in their operation: if wantonly employed, therefore, for mere curiosity or for amusement, they would have been frightfully cruel. But what has been the result? I refer in answer, to the treatment of persons poisoned, as it existed even at the commencement of the nineteenth century, contrasted with that of the present day. With what happy promptitude in one case is the stomach-pump applied, instead of time being wasted, and the patient at last sacrificed by relying upon supposed antidotes; and how certainly, in another case, does the physician employ the means which chemistry has furnished him to neutralize the deadly drug! To experiments on animals carefully conducted and repeated over and over again, and to nothing else, can we attribute the happy change from the fruitless trifling of the old herbalist to the energetic practice of the modern physician.

"In a late number of the 'Quarterly Review,' the illustrious writer whose experiments I have alluded to is mentioned in a note, as having 'sacrificed the lives of 10,000 animals in the course of his researches into the actions of poisons,' and he is accordingly classed with what the Reviewer is pleased to call 'the Frenchified, butcherly school of anatomical experimenters.' I should like to know how many thousand lives have been sacrificed with no other object than *mere amusement*, by those hard-riding gentlemen whose exploits the Reviewer elsewhere takes such pains to celebrate. The man who devotes years of study to learn how he may best alleviate the pain or save the lives of his fellow-creatures, is called a 'butcher.' If he had quitted his study for the field, had dressed himself like a mountebank, and had ridden his horse to death, or had killed ten times ten thousand hares and rabbits, the Reviewer would have seen nothing wrong in his conduct, and instead of a 'butcher,' would have styled him 'a gallant sportsman.'

"The whole question of the lawfulness of the experiments of Orfila and others, is well stated by Sir David Barry, who devoted much time and labour to an inquiry into the actions of poisons on living animals, with a view to improve the treatment of poisoned wounds. 'Others,' he says, 'talk of needless cruelty. If any useful knowledge is to be obtained by an experiment, none of the means necessary to arrive at that knowledge can be useless, and none else can be adopted without defeating the purpose aimed at; therefore, in useful experiments, there never is needless cruelty, or, in other words, unnecessary pain inflicted.' "

The importance of vivisection in physiology is next insisted on, and to the opinion that the performance of any experiment once is sufficient, and that it will do others to have the results stated to them, he objects:

"Thousands of dead bodies have been dissected, and there are anatomical works without end which contain the results of such dissections, and yet each student has to go through the same processes, to impress things on his memory. So if there be any thing seen on opening a living animal which is important to be seen and to be re-

membered, each must use his own eyes, and not content himself, any more than in questions of human anatomy, with the written reports of others."

After considering its importance to the surgeon previous to performing a great operation, he next objects to indiscriminate or careless use, and makes the following powerful remarks :

"In a passage which Dr. Styles quotes from Dr. Millengen's *Curiosities of Medical Experience*, the author says that vivisection should not be made 'a public exhibition or a student's pastime.' This remark is most just. Among the precautions to be observed by the vivisector, none is more essential than *the avoidance of display*. When an important end is to be gained (as was the case in the experiments I have previously noticed, by Orfila, Dupuytren, Sir A. Cooper, Bell, and others), the means indispensable to that end do not constitute cruelty. In employing these means the experimenter is justified by stern necessity, and, if duly impressed with the importance of his researches, can no more feel an inclination towards display than a conscientious surgeon would during a critical operation.

"Those who consider all infliction of pain on the lower animals unjustifiable, may charge me with carrying the principle of expediency too far. To such I would reply, by asking on what ground but the supposed necessity to an end is the punishment of death tolerated in the present day? The feeling of revenge, which originally prompted it, is out of the question in a civilized community. It is inflicted on offenders to deter others: 'On ne corrige pas,' says Montaigne, 'celuy qu'on pend; on corrige les autres par luy.'" Whether the proposed end be really attained is doubted by many enlightened persons: no doubt can exist, however, that the means are shocking, infinitely more so than any vivisection of brutes. In killing the latter mere pain is the result; take the most agonizing process by which a creature's life can possibly be extinguished, still it is so much bodily suffering: we destroy a creature without moral sense, and incapable therefore of doing right or wrong; we prevent no virtue in this life, we hasten no punishment in another.

"How different is the case of a criminal! Who can say if his life were spared that he would not repent? It is not likely, perhaps, but it is possible. He may have been seduced by evil example, the strongest temptation may have assailed him, he may never have had (how often is this the case!) the benefits of education. If that education and moral training were begun even now, his whole nature might be changed, he might yet become a good and happy man: by killing him you prevent all his possible virtues, you make him *die wicked*. And if we take the more solemn view of the question; if we believe that his future fate *through all eternity* depends upon his life *here*, what a responsibility do we take upon ourselves! By making a change of life impossible, we seal his everlasting doom."

The natural repugnance one feels to inflict pain on the lower animals is not a fair argument against these experiments, be-



cause we feel an equal repugnance to inflict pain on our fellow-men, and yet we perform the most painful operations, the scooping out of an eye for instance, convinced that by so doing we purchase for the sufferer future benefit, far, far beyond the temporary pain. Mr. Jameson concludes by dilating on this proposition :

“ That while necessity alone compels us to take away the lives of animals, our accusers are daily accessory to their wholesale destruction, for the mere gratification of luxury, or ~~as an~~ amusement to while away the passing hour.”

This *tu quoque* sort of argument is not exactly to our taste, and, as we have said before, we would prefer taking the thing on its merits or its necessity, than setting up a sort of oblique defence by accusing the accusers of doing as bad or worse. Mr. Jameson, with great talent, animadverts on the painful killing of animals for food ; the mutilation of them to improve their flavour ; bulls and rams gelded, sows splayed, cocks converted into capons ; geese confined to one spot close to a fire, and stuffed with food, until a disease of the liver takes place, which converts that organ into fat for *patés de Strasbourg* ; turkeys crammed by main force ; lobsters boiled alive, &c. He vigorously attacks the inconsistency of the members of the Society boasting of having put down bull-baiting and vulgar pastime, while nothing is attempted against the nearly equally cruel, but royal amusement of stag hunting. “ Did the poor bull’s suffering arise from the social position of his persecutors ? Or do you suppose the stag feels less agony because his tormentors are lords and gentlemen ? Prince Albert’s hounds bite ~~as~~ sharply as the butcher’s bull-dog.” We should be happy could we find space to present our readers with Mr. Jameson’s illustrations of how badly the patrons of the Society for the Prevention of Cruelty to Animals, exhibit by their conduct the feeling which their position would promise. Beginning with the Queen (the chief patron) who baits hares with beagles, he then brings forward the Duke of Cambridge, “ who killed with his own gun about sixty head of game ;” the Duke of Devonshire and the Duke of Buccleugh killing grouse, pheasants, and hares in abundance ; Lord F. Egerton, another patron, who gave the clerks and agents in his employment a day’s coursing, when they killed twenty-two hares. But we have made quotations enough to convey some idea of the talent and interest of this letter, and we shall therefore conclude with Mr. Jameson’s final observations :

“ Before I bring my letter to a close, allow me once more distinctly to repeat my declaration, that in charging your patrons with



the grossest inconsistency and injustice, I do not mean to accuse them of *wilful* oppression and tyranny. I have no doubt that the hunters and shooters of Windsor and Chatsworth think they are simply advancing the cause of humanity in punishing the baiters of Westminster and cock-fighters of Hillingdon. The persecutors do not see the wrongfulness of their own pursuits, simply because it has never been fairly pointed out to them. The sportsman shoots and hunts because his father and his friends hunted and shot before him; the possibility of his amusements being cruel has never once occurred to him. Just so it was in Great Britain a century ago with respect to slavery. Englishmen had been accustomed to buy and sell Negroes just as they did pigs or poultry; and yet those Englishmen were not perhaps worse people than their grandsons. Whitefield (a sincerely pious Christian, if ever there was one) bought Negroes and worked them, and at his death bequeathed them to—‘that elect Lady, that Mother in Israel, that mirror of true and undefiled religion, the Right Honourable Selina, Countess Dowager of Huntingdon.’ In his will the Negroes stand just midway between his ‘lands’ and his ‘books and furniture’! But one by one, and little by little, men began to see that the slave-trade was wrong: Sterne said something, and Granville Sharp, and Clarkson, and Wilberforce, said more, and at last most Englishmen were ashamed of what they and their fathers had done as a matter of course; and now every child will tell you that slave-dealing is a sin. When the thing was pointed out to the people they saw it, but not before: having once clearly seen it they can never lose sight of it again.

“If the Society over which your lordship presides be really anxious to act up to its title, let it throw aside all that reverence for rank which at present checks its efforts or renders them ridiculous. If cruelty is to be punished, let it be condemned *for its own sake*, not because its effects are sometimes painful to the beholder who happens to have weak nerves: and let it be punished alike in all. In the mean time, let the Society make a better use of its funds than to give away a hundred pounds for an ‘Essay on the Animal Creation,’ by one who is ignorant of the commonest facts connected with it. Above all, let it beware how it attempts, by well-meant, but ignorant interference, to check the progress of a science, whose noble aim it is, by mitigating disease, to prolong the lives, increase the happiness, and promote the social welfare of mankind.”

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*On Dysmenorrhœa, and other uterine Affections, in Connexion with deranged Assimilation.* By DR. RIGBY.

IN the short work before us Dr. Rigby has taken a good deal of pains to shew an intimate connexion existing between deranged assimilation and dysmenorrhœa, with some of its consequences and complications. Influenced by his admission that

the investigation of the affections, to which his observations refer, is still far from being so perfect as he could wish it to be, we shall rest satisfied with laying before our readers some of the points on which he particularly dwells, and for further information refer them to the work itself. It is divided into two parts, the first being confined to a brief consideration of assimilation with its derangements, and the effect of these, as evidenced by a vitiated condition of the blood, and faulty secretion, with an altered state of the functions of the skin and mucous membranes. Into the details of these consequences of mal-assimilation we shall not follow him further than to state, that having shewn

“ That a very intimate connexion exists between the assimilation of the albuminous principle, and the function of the mucous membranes, it will be equally manifest that a healthy or unhealthy condition of the one will determine a corresponding character of function in the other. The secretion from those membranes is of a more or less modified albuminous character, and experience shews, as a general rule, that in mal-assimilation of the albuminous principle, this condition of the mucous secretion usually holds a pretty exact correspondence with the quantum of lithic matters discharged by the kidney.”

Dr. Rigby further dwells on the altered state and action of the mucous membrane, as remarked in the rheumatic and gouty diathesis, wherein their circulation, but more especially the venous, becomes much congested, and the membrane assumes a relaxed, swollen, and deeply injected, even purplish appearance; at times coming on suddenly, and manifesting the same erratic character as gout in other parts. As an illustration of this he refers to attacks of gouty asthma. The occurrence of hæmorrhoids he also adduces as a further illustration of the disposition to congestion of the mucous membrane in these habits, with also the increased secretion of an albuminous transparent mucus, “ particularly distinct in the rectum, and seemingly closely analogous to the albuminous discharge from the cervix uteri and vagina, in certain uterine affections.”

The great tendency in gouty habits of the mucous membrane (but especially of the rectum) to secrete gas, is another point of importance, which will be found to bear out the analogy he wishes to demonstrate as existing between such gouty affections consequent on mal-assimilation and the uterine affections, of which we come now to speak. These he, “ in default of any more appropriate term,” designates uterine rheumatic gout, meaning thereby to imply

“ A certain series of local phenomena or symptoms preceded or attended by a corresponding state of the general system; they are



chiefly of a congestive or inflammatory character, or at least in some degree resembling the phenomena of inflammation, being attended with local vascular excitement of a more or less acute nature, with the chief features of inflammation, viz., heat, swelling, redness, and pain; or of a chronic form, with much venous engorgement, swelling, induration, and ultimately alteration of structure. The first form is more sudden in its attacks and recessions, more erratic in its movements; the latter more gradual, but fixing on the part with a firmer hold, and relinquishing it with proportional difficulty. The acute form is usually seen in connexion with dysmenorrhœal attacks, or with the uterine excitement which is generally observed in such cases, at the half-way time between the menstrual periods. The other is mostly attended by chronic leucorrhœal discharge, and chronic or subacute inflammation of the cervix uteri, followed by induration and organic disease. If not arrested by proper treatment, the acute sooner or later passes into the chronic form, in which case they may be looked upon as different stages of the same disease. The majority, however, of these affections are of a chronic or subacute nature; whether so originally, or from the circumstance that the change from the acute to the chronic form frequently takes place at an early period of the disease, is not very easy to determine."

Dr. Rigby's experience goes to prove, that these symptoms are mostly met with in systems more or less predisposed from long continued dyspeptic and other gastro-enteric derangements, not unfrequently, when the acute form is present, ushered in by an attack of rheumatic fever or gout; or, the general diathesis being gouty, by exposure to cold during a menstrual period or an early abortion, constituting "in fact an attack of dysmenorrhœa in a gouty habit." These are the cases in which exudations are now and then met with, but not necessarily so. The cause of this exudation Dr. Rigby declares his inability to state with certainty, but inclines to the opinion of its inflammatory origin.

"If there be any fact," he says, "which seems to be common to all the cases of dysmenorrhœa which have been attended with exudation, it is the co-existence of some local inflammatory action of a neighbouring organ. In some it has been the kidney, in others (and on the whole more frequently) the ovary, which may easily be presumed from its close connexion with the uterus, and from the generally received opinion of its being essential to the function of menstruation. In others the os and cervix of the uterus itself have been the seat of inflammation."

The chronic form of this so called uterine rheumatic gout is for some time, our author states, preceded by increasing derangement of the assimilating functions, causing, as already alluded to, vitiated circulation, unhealthy action of bowels, with



lithic deposits in the urine, headach and much depression of mind, with more or less atonic leucorrhœa. The disease, in many instances, seems chiefly confined to the vagina and rectum, and is, therefore, unattended with dysmenorrhœa. There are at times symptoms evidencing a state of congestion of the pelvic region (coming on and going off suddenly), as a sense of fulness, weight, heat, and throbbing, with extreme sensibility, so as to require the greatest caution in sitting down.

“On examination, the labra and nymphæ are usually found swollen and flabby, and copiously moistened with a thick, creamy, albuminous discharge. Occasionally, however, they are hot and turgid; the vagina is in a state of soft, flabby tumefaction, its parietes in close contact with each other, and its calibre much diminished by the swelling. The mucous membrane is swollen, and shews evident marks of venous congestion; it is every where thickly covered with the above-mentioned white, or yellowish-white discharge, and not unfrequently the canal is so exquisitely sensitive as to render the introduction of the finger very painful, and sometimes even impossible.”

But the most remarkable symptom is the frequent discharge of flatus from the vagina, apparently the product of secretion from the mucous membrane of this canal, or of the uterus itself. This phenomenon, Dr. Rigby is of opinion, never occurs, except in uterine affections of a rheumatic, gouty character, and, so far from being rare, he believes that uterine derangement, in connexion with this diathesis, seldom or never occurs without the presence of this peculiar symptom; the reason of its not being noticed, he attributes to delicacy on the part of the patient:

“It varies,” he says “much in its appearance; at times taking place to a very considerable extent, being formed very rapidly, and escaping on the slightest motion of the patient; at other times it only occurs towards evening, or is expelled on making any violent exertion; while in some instances, it is only observed at the menstrual periods.”

The considerable excess of urea, uniformly observed in those cases he had constant and regular opportunities of examining, tends, our Author thinks, still further to establish the identity of these uterine affections with gout.

A hæmorrhoidal diathesis is also met with in a large majority, with a state of the mucous membrane of the rectum analogous to that of the vagina already alluded to, with increased secretion of mucus, and at times, flatus.

These attacks of pelvic congestion, though at first transitory, eventually become permanent, and the disease may go on until “symptoms threatening the commencement of scirrhus are but too distinctly established.” The darting, lancinating pains so

generally deemed characteristic of scirrhus, Dr. Rigby thinks not correctly so considered. " Darting pains, however," he says, " cannot be pronounced to be peculiar to this disease, even in its earliest stage of induration." He thinks they are merely neuralgic, and are called into action by the sudden paroxysm of congestion taking place in a gouty condition of the part, bearing a close analogy to the twinge of a gouty foot, and to the darts of pain in *tic dolooureux*, depending on gouty or dyspeptic irritation. This is plausible, but seems a little hobby-horsical.

Thus has Dr. Rigby, following out the views of Dr. Prout, and applying them to his own peculiar department of practice, endeavoured to draw an analogy between these uterine affections and gout, and so refer them to a mal-assimilation. We have abstained from giving any opinion as we passed along, but cannot conclude without stating, that we think the whole has been much overdone, and not by any means satisfactorily borne out by the seven cases he gives. We had expected to have been furnished with some additional information as to the treatment, resulting from the views of these affections taken by the Author, but find ourselves doomed to disappointment. The treatment, as laid down, contains nothing new, resolving itself merely into the round of aperients, tonics, and alteratives, with the usual modes of relieving local congestions. As to the exhibition of *guaicum* and *colchicum*, Drs. Dewees and Locock had already advised such. Dr. Rigby concludes with a tabular view of the analysis of the urine, as taken in three cases, and a few directions, by attending to which, he says, the practitioner may be enabled to observe the more important phenomena presented by the urine in these diseases, and turn such knowledge to profitable account. For these we refer the reader to the work itself, fearing we have already occupied too large a portion of his time.



*On Paracentesis Thoracis, with Cases.* By H. M. HUGHES, M. D., and EDWARD COCK.\*

*On Paracentesis Thoracis as a curative Measure in Empyema and inflammatory Hydrothorax.* By HAMILTON ROE, M. D., Physician to the Westminster Hospital.†

*Account of a Case of Empyema, which recovered after Punctures of the Pleural Sac.* By THEOPHILUS THOMPSON, M. D., Visiting Physician to the Hospital for Consumption, and Diseases of the Chest.‡

*Empyema, and its Cure, Medical and Surgical: the Result of original Observations.* By Dr. ALBERT KRAUSE, Physician to the Royal Lying-in Institution at Danzig.§

*Clinical Lectures—Paracentesis Thoracis.* By PROFESSOR SCHÖNLEIN.||

IN the April Number of Guy's Hospital Reports for 1844, we find a long Paper on Paracentesis Thoracis, by Dr. Hughes and Mr. Cock; the former treats of the medical, and the latter of the surgical part of the question. In Dr. Hughes' lucubrations we find nothing that is not sufficiently well known already to our readers: it is composed of a few trite remarks that have appeared over and over again in various forms in different lectures and treatises published on the subject, and we were not a little surprised to find many of them introduced as if the result of the author's own observation, and advanced in a manner not only calculated to mislead an inexperienced reader into the belief, that previous to the appearance of Dr. Hughes' essay, the Profession was immersed in midnight darkness on the subject, but also to lead him to suppose that the writer had made some important discoveries, which would soon remedy this excessive ignorance. Our space is too limited to enable us to give many passages from the paper to support these statements, but we confidently refer to the Essay itself for confirmation of them. Is there any thing new, we would ask, in the following summary of the indications calling for the operation of paracentesis thoracis?

“The indications, then, for paracentesis in empyema, or chronic pleuritic effusion, appear to be, in the first instance, the presence of a large quantity of fluid in the pleura, rapidly effused; in the second, the distress of the patient, dependent on the great accumulation of fluid; and in the third, the existence of a considerable amount of

\* *Guy's Hospital Reports*, Second Series, No. 111, April, 1844.

† *Lancet*, May 4th, 1844.

‡ *Ibid.*

§ From a Review in “*The London and Edinburgh Monthly Journal*,” June, 1844.

|| *Lancet*, for 1844.



effusion, together with such a state of constitution, or of general health, or such other circumstances, as would render a prolonged purely medical treatment injurious, or undesirable."

In other parts of his paper Dr. Hughes introduces remarks that, notwithstanding their new garb, we must claim as old acquaintances; thus, at page 58, our author, speaking of the diagnosis between a phthisical cavity and pneumothorax, very confidently puts forward, as the result of his own observation, the following points of difference:

"The diagnosis, in a vast majority of cases, may, notwithstanding, be effected with facility, and, in circumstances of difficulty, may be assisted by the following considerations: In simple phthisis, the tympanitic resonance and the metallic tinkling (not common in any degree) are rarely so well marked as in pneumothorax; while succussion is so very unfrequent in the former, as never, with certainty, to have been heard by myself, or by any one with whom I have communicated on the subject. Laennec is reported to have heard it on one occasion. In pneumothorax the chest is *generally* enlarged; in simple phthisis it is almost always contracted. In the former affection the patient usually lies on the affected side; in the latter, upon either side, or upon the back indifferently. In pneumothorax the cavity is commonly at the lower part of the chest; in simple phthisis the chief excavation is almost universally at the upper part."

Seeing that all the important points of diagnosis in the above passage had been for some years before the Profession in Dr. Stokes's work, we did expect that our author would have made some sort of allusion to the researches of the latter gentleman, particularly as he admits in various places having perused that excellent treatise; if so, we cannot help wondering how the passage should have escaped his notice. It alludes to the diagnosis between a phthisical cavity and pneumothorax, and runs thus:

LARGE CAVITY WITHIN THE LUNG.	PNEUMO-THORAX, FISTULA, EMPYEMA.
" 1. Metallic phenomena much less developed.	1. Metallic phenomena intense.
" 2. Signs supervening gradually.	2. Phenomena suddenly developed.
" 3. Side not dilated. It may be contracted.	3. Side generally dilated.
" 4. Sound on percussion dull, or with resonance of a cavity.	4. Percussion exactly indicating the extent of air and liquid.
" 5. No lateral displacement of the heart.	5. Lateral displacement considerable.
" 6. Cavernous râle large.	6. Cavernous râle absent.
" 7. Sound of fluctuation absent or indistinct.	7. The reverse.
" 8. Pectoriloquism often present.	8. Pectoriloquism absent.*

\* Diseases of the Chest, p. 408.

On comparing these two extracts, it will be evident to our readers that all the valuable diagnostic points have been insisted on much more fully by Dr. Stokes than by our author, and we cannot but think that he would have done his readers a greater service by extracting the whole passage we have just quoted, than by the introduction of portions of it. Dr. Hughes next alludes to the diagnosis between empyema and phthisis, in which we find nothing worth quoting; he is evidently quite ignorant of the forms of empyema, to which Dr. Green and Dr. Robert Mac Donnell have directed the attention of the Profession, otherwise he could not have written that he has

“Known many cases, very many cases, in which empyema has been mistaken for phthisis. But this has arisen, *not from any real difficulty in the diagnosis of the two complaints, and when the physical signs have been consulted, but simply from their not having been efficiently employed.*”—page 61.

We beg to assure Dr. H. that there are cases which do present very great difficulties, even where physical signs have been “*efficiently employed*,” and by physicians equally skilful as he is, in availing themselves of the assistance of those signs. In support of his view Dr. H. gives the following case:

“An intelligent practitioner, and a very fair auscultator, formerly a pupil of Guy’s Hospital, sent a patient from the country town in which he resided, for my opinion as to the condition of the chest, as the individual had many, or most of the general symptoms of phthisis, though he was unable to detect any physical indication of the existence of that disease in the apex of either lung. I stripped the patient; the complaint appeared evident at a glance; auscultation and percussion completely confirmed the hasty conclusions derived from simple inspection. I sent him back to his medical attendant, with a note requesting him to inspect and examine the whole chest, but without stating my own opinion. He immediately wrote in reply that there could be no doubt of the presence of empyema, which would consistently explain the whole course of symptoms, and that the clear indications of that disease had not been previously discovered, simply because the probability of their existence had not been contemplated, and therefore had not been investigated.”—page 62.

We leave our readers to form their own opinion of the *intelligence* of this practitioner, but we cannot agree with Dr. H. that he was “a very fair auscultator,” although “formerly a pupil of Guy’s Hospital;” nor can we bring ourselves to believe that he knew anything at all about the science, otherwise he would not have sent his patient “from the country town in which he resided” up to London, for Dr. H.’s “opinion as to the condition of the chest,” without having himself previously examined every part, particularly as he had failed to find evi-



dence of phthisis at the apex of either lung. This simple case of empyema, examined by a careless or ignorant practitioner, is adduced to shew how easily the disease might be mistaken for phthisis !

Dr. Hughes next discusses the diagnosis between empyema and malignant disease of the lung or pleura, and adds, that

“ Neither Dr. Townsend nor Dr. Stokes enter upon the diagnosis between these two complaints ; and though I have recently perused, for the third time, the valuable essay of the latter gentleman on malignant diseases of the lung, in the twenty-first volume of the Dublin Journal, I am unable to collect therefrom anything which induces me to alter the tenor of the following observations in the sixth volume of Guy’s Hospital Reports.

“ ‘ It must, however, be added, that the disease sometimes, as in the second case herein related, very accurately resembles empyema ; that the history of the case, and the physical signs are on such occasions insufficient for the purpose of distinguishing the two complaints ; and that the diagnosis, if at all practicable, must be deduced from the general symptoms, the peculiar character of the expectoration, the obstruction to the flow of blood, through the superficial veins of the affected side, and the appearance of malignant tumours in other parts of the body.’ ”—page 65.

Here, again, we find Dr. Hughes appropriating to himself the discoveries of others, and we see with what self-complacency he puts forward the ground of diagnosis between malignant disease of the lung and empyema, coolly asserting that “ neither Dr. Townsend nor Dr. Stokes entered upon the diagnosis between these two complaints.” This last announcement, we confess, took us completely aback, particularly as we had so often perused the points of diagnosis in Dr. Stokes’s book, to which Dr. H. alludes, and we now quote them that our readers may compare what Dr. Stokes published in 1837, with that put forward by Dr. Hughes in 1844. After describing an interesting case of cancerous disease of the lung, Dr. S. points out the particulars in which it differed from ordinary phthisis and pneumonia, and then goes on to detail the circumstances in which it differed from empyema :

“ Lastly,” he says, “ it was at one time supposed that the case was empyema, but with this the signs were also irreconcilable ; the side was contracted, the intercostal spaces unaffected, the vibration of the voice was not extinguished ; position made no difference in the signs ; the heart was in its natural situation, and the liver was not displaced until a short time before death. The dulness and absence of respiration, if proceeding from empyema, would point out the greatest possible effusion, yet the remaining phenomena were inconsistent with this condition.”

“ But other unusual circumstances existed, namely, *the varicose*



*state of the subcutaneous veins, the dysphagia, the predominance of œdema on the right side, the apparent enlargement of the liver, and the growth of these external tumours, which were, doubtless, of the same nature as the internal lesion."*

Again, in his paper on "Cancer of the Lung and Mediastinum," in vol. xxi of this Journal (and which Dr. H. says he has read three times over, without finding anything which could enable him to distinguish between that disease and empyema), we find Dr. Stokes speaking more explicitly on the point :

*"That the following symptoms are important as indicative of this disease: pain of a continued kind; a varicose state of the veins of the neck, thorax, and abdomen; œdema of one extremity; rapid formation of external tumours of a cancerous character; expectoration similar in appearance to currant jelly; resistance of symptoms to ordinary treatment.*

*"That though none of the physical signs of this disease are, separately considered, peculiar to it, yet that their combinations and modes of succession are not seen in any other affection of the lung."*

These passages, from Dr. Stokes's writings, show, beyond doubt, that he had, long before the appearance of Dr. Hughes's essay, pointed out the grounds of diagnosis; and we only wonder how Dr. Hughes could, after the third perusal of Dr. Stokes's paper, assert that he had not entered upon the diagnosis between the two diseases. In one part of his paper, Dr. H. states, that "there are few members of the Profession for whose opinions I have a greater respect, and I may perhaps add, from whose writings I have derived more information than those of Dr. Stokes," we have only to hope that, in future, he will acknowledge with candour the source from which he derives that information.

These remarks have been suggested by an attentive perusal of Dr. Hughes's various essays, all of which are strongly tainted with the same fault we have pointed out, viz., putting forward, as his own, the discoveries of others, and which, we trust, will be remedied in his future lucubrations.

Mr. Cock prefers opening the chest "below the scapula, between either the seventh and eighth, or eighth and ninth ribs, and at a point distant from one to three inches from the angles of the bones." At page 70, he says :

*"I will make a few remarks on the size of the instrument which I employ for paracentesis thoracis; for I consider this to be a matter of considerable importance as regards the facility of introduction, and the diminished liability to injury, as well as the successful result of the operation. The trochar and canula which I have found best adapted for general use is about one-twelfth of an inch in diameter, and about two inches in length, exclusive of the handle. In some cases, where there exists great œdema of the subcutaneous tissue, a*

longer instrument might be required to penetrate the pleural cavity, and I have in more than one instance found it necessary to pit the skin by pressure with the finger, before the canula could be pushed far enough to reach the fluid. I prefer a circular to an oval instrument, as the former is more easily introduced and does less injury to the intercostal muscles, whose fibres are perpendicular to the long diameter of the oval canula. I am aware that I use a much smaller instrument than is usually employed in paracentesis, but I think it has many advantages; its introduction is easy, and attended with so little friction, that the operator feels his way before him, and is immediately conscious when he has entered the cavity of the chest. It gives but very slight pain, as it does little more than separate, instead of lacerating the tissue through which it passes; and it is calculated to elude the nerves and vessels, whose immunity from injury no skill or care of the operator may otherwise be enabled to secure on every occasion. On its withdrawal, the opening which it has made becomes immediately and permanently closed, thus at once restoring the integrity of the cavity which has been entered. It is adapted to all ages, from the infant to the adult, and can hardly fail to find its way between the ribs, however narrow the intercostal space may be from age or formation, and however nearly the bones may have become approximated during the progress of the disease."

Mr. Cock next alludes to the narrowing of the intercostal spaces, which, he very correctly observes, is noticed in the advanced periods of empyema; but he is wrong in attributing this change to a mere mechanical approximation of the bones to each other, as it has been shown at the Pathological Society of Dublin, to be owing to an actual enlargement of the ribs, the tendency of which is to destroy the intercostal space, and thus bring the ribs into closer proximity. Mr. Cock, however, deserves credit for having observed the fact, though unaware of its true explanation.

Another advantage claimed by Mr. Cock for his mode of operating is,

"That it ensures a slow and gradual evacuation of the fluid, and enables us to avoid the admission of air, both of which are, in my opinion, matters of great importance in the operation, more especially where the effusion is of recent occurrence, and when we may, therefore, reasonably suppose that the lungs have not become permanently collapsed by the pressure."

He next discusses the point, whether or not admission of air into the cavity of the pleura, during the operation, is attended with danger; he is decidedly of opinion that it is, but as we intend introducing the interesting debate on this subject, which took place lately at the *Medico-Chirurgical Society*, we shall pass over Mr. Cock's excellent remarks, merely stating, that he has observed on some occasions, after the operation of tapping



for *hydrothorax*, that a change has taken place in the character of the fluid which either had been left in the cavity or had become subsequently secreted; that when, after the lapse of a short period, paracentesis has again been performed, the fluid had lost the limpid transparency of pure serum, and become turbid and discoloured, approaching more in its characters to the fluid of empyema.

Dr. Hughes and Mr. Cock next give a table of twenty cases of empyema, in which the operation was performed, in some with perfect success, in others with relief. Out of the twenty cases there were six in which phthisis complicated the disease, in two of which the patients were labouring under the affection at the time of the operation, and it was only proposed as a palliative measure; in the other four cases the disease ensued after the operation, or, at least, was not detected at the time it was performed.

There were seven cases of perfect recovery, in five of which there was no other disease; in one there was secondary syphilis, in the other a "tumour of the abdomen." There were also three cases of *partial* recovery, one of which was complicated with an old pneumonia, another with ascites, diarrhoea, and phthisis, and the third was accompanied by enlarged liver\* and ascites.

From these facts it appears, that when the empyema is uncomplicated with structural disease of the lungs or other organs, that the operation, so far from being dangerous, has, in the hands of Mr. Cock, been extremely successful; and we have no doubt whatever that this success is in a great measure due to the mode of operation proposed, and the instruments employed by him, which we have reason to know are those now generally adopted by most of our Dublin surgeons, and with very remarkable success as compared with the old mode of tapping the chest. We must now conclude our notice of this very useful paper, and regret that we felt it our duty to speak of Dr. Hughes's portion of it, as our sense of duty dictated.

We are unable to give our readers a more full account of Dr. Hamilton Roe's paper on *Paracentesis Thoracis* than is contained in the *Lancet* for May 4th, 1844, from which we extract the following notice of it, and the discussion that followed the reading of Dr. Roe's and Dr. T. Thompson's communications, from which our readers will ascertain the opinions of some of the leading members of the Profession in London, with respect to the operation:

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\* The case is given in detail in the essay; the empyema was situated in the left pleura, and was evidently one of those cases to which Dr. Robert Mac Donnell has directed the attention of the Profession, and to which we shall return farther on.



“The author commenced his paper by alluding to the very generally-received opinion of the uselessness of paracentesis thoracis as a curative measure in the treatment of pleuritic effusions, as founded upon the supposed facts, that re-accumulation of fluid necessarily takes place after its withdrawal by the operation; that the frequent repetition of tapping subsequently demanded in those cases in which life had been prolonged by it, was only sufficient for the alleviation of certain urgent symptoms; and, lastly, that recorded experience is completely opposed to the employment of the operation. His own experience had induced the author to depart from these opinions, and a careful examination of the cases recorded by various writers during the period of thirty years, had supported him in the correctness of the results at which he had arrived. Of thirty-nine cases recorded in British medical journals, between the years 1812 and 1842 (a period selected as that in which an acquaintance with auscultation had rendered the diagnosis more accurate), in all of which paracentesis had been had recourse to, he had found that eleven only died. Twenty-four cases had occurred to himself, and the chief object of the author was to prove, from the results he had obtained, that the operation was as free from danger as any other performed upon the human body; that most of the evil consequences supposed to attend it are far more imaginary than real; that it is commonly successful when employed at an early stage of either empyema or inflammatory hydrothorax, and the common cause of failure is to be found in the late period at which alone it is alone regarded as admissible.

“The author next proceeds to notice at length the objections of certain writers to the treatment of empyema by operation, and opposes the opinion that the ultimate removal of pleuritic effusion must depend upon the action of the absorbents, and observes, ‘that the proper function of the absorbents is to carry off the ordinary healthy secretion, but not a diseased one; that this power may be sufficient to take up the quantity usually secreted, and yet wholly unequal to take up many pints added to it;’ and that it is, at least, very probable that the action of the absorbents becomes paralysed, partly by over-distention of the membrane in which they are situated, and partly by the general prostration of strength produced by the great suffering and the disturbance which the other functions undergo from the pressure upon vital organs. These views were supported by a case of inflammatory hydrothorax, in which the withdrawal of a small quantity of fluid from the chest was sufficient to lessen the mechanical pressure upon the absorbent vessels, and thus to enable them to reassume their healthy action, and by which the great bulk of the fluid was subsequently removed.

“With reference to the supposed dangers of the operation, the author had been unable to find one case on record in which mischievous results had occurred; in his own practice no precaution had been employed to prevent the admission of air into the pleural cavity, but no bad results had followed; and even in one case (the only example of the kind) in which the air failed to be absorbed with the rapidity commonly observed, it had been readily withdrawn by means

of a syringe, the wound made in tapping the chest having been healed; but, although the accidental admission of air at the time of the operation was never productive of bad effects, yet its continued entrance in those cases in which a fistulous opening had been made into the pleura, had very commonly been followed by mischievous results; the author, therefore, was strongly in favour of the complete removal of the fluid, and the immediate closing of the aperture. Although it was difficult to determine what length of time might, without danger, be allowed, for the exhibition of internal remedies, yet, from his own experience, the author was induced to believe that in the general class of cases three weeks is the longest period that can with safety be permitted to elapse before the withdrawal of the fluid. In none of his own cases had complete restoration of the lung resulted after it had been subjected to the pressure of pleuritic effusion for six weeks. It was important to understand rightly the exact state understood by the term 'cured empyema,' much of the difference of opinion relative to the propriety of tapping the chest depending upon the varied manner in which such expression is employed. Thus, in the posthumous essay of Dr. Hope, a long line of cases of empyema are recorded, in which the continued action of mercury was followed by 'cure.' In the essay in question, however, it is not stated that in any one case the lung had been restored to its healthy condition. By the early employment of paracentesis, those changes in the pulmonary tissue by which its expansibility is destroyed are prevented, and thus, not only is the removal of the pleuritic effusion effected, but the lung also restored to the full performance of its function.

"The author next describes, at length, the morbid changes produced in the pleura by the long continuance of purulent collections, more particularly alluding to the manner in which the pleural sac becomes ultimately obliterated in chronic cases of empyema, in which the effusion has been very slowly removed, and at a later period. As one of the secondary effects he had also observed, that tubercular disease of the opposite lung not unfrequently occurs in old cases of empyema. Amongst the several changes produced in the lung during the existence of pleuritic effusion, the most important were those by which it was rendered subsequently incapable of expansion. In old cases of hydrothorax, the author had observed such effects to result from condensation of the pulmonary tissue, which was often so complete as to prevent even partial expansion by the artificial introduction of air. In the cases in which purulent secretion had resulted, it had been frequently found that the pleura had become wholly altered in character; in some cases adherent to the parietes of the chest, in others greatly thickened and contracted, and so binding down and compressing the lung as to render its restoration impossible.

"Twenty-four cases had occurred to the author, which had been treated by paracentesis thoracis; of these eighteen recovered, and six died. Nine of them were cases of purulent effusion, of which eight recovered, and one died. Thirteen were cases of inflammatory



hydrothorax, of which nine recovered, and four died. One was a case of hydrothorax dependent upon cardiac disease, in which relief was afforded by the operation, and the remaining case was one of pneumothorax, having a fatal termination.

“In conclusion, the author remarked on the comparative value of certain physical signs, alluding to one of them, namely, the distention of the intercostals, as a differential sign, serving to mark the character rather than the quantity of the contained fluid. He had repeatedly found that retraction of the intercostals had existed with a very large amount of pleuritic effusion; and, on the other hand, that very distinct bulging of those spaces had been present with a very small quantity of fluid. In the former class of cases the fluid had been serous, in the latter purulent, and he was disposed to adopt the opinion of Dr. Stokes, and of some of the older writers, who believe that the projection of the intercostals depends upon the purulent character of the effusion. The inability for patients affected with pleuritic effusion to lie upon the healthy side had not been observed to accord with the opinion commonly expressed in systematic works, but that the contrary rule obtained in nearly one-half of the cases. It was somewhat remarkable that the disease more commonly existed on the left side of the chest, and of the twenty-four cases adduced by the author the ratio had been as two and a half to one.”

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“In the summer of 1843, Dr. Thompson visited, with Mr. Roberts, of Great Coram-street, a little boy, between five and six years of age, who had suffered for two months from febrile symptoms. On examining the chest conclusive indications were observed of purulent effusion in the right side, and the operation of paracentesis thoracis was performed on the 27th of June. The puncture was made through the fourth intercostal space, and fourteen ounces of pus were withdrawn, various precautions being adopted to prevent, as much as possible, the access of air. On the 30th of June the operation was again repeated, and about a pint of matter withdrawn. The relief obtained, although very considerable, proved only temporary; notwithstanding the use of appropriate remedies the accumulation was renewed, and on the 10th of July the operation was performed for the third time, twenty ounces of pus being removed. After the performance of the fourth operation, on the 21st of July, when twenty-two ounces of thick, but not foetid matter was removed, the boy improved in strength, and the excess in girth of the right side of the chest over the left was materially reduced. On July 28th the puncture, which had been for some days perfectly healed, opened spontaneously, and within twenty-four hours, gave exit to about four ounces of pus. After three days the discharge ceased, but above the seat of the two last punctures a swelling was formed about two inches in length, at the posterior part of which an aperture, discharging matter, appeared. On the 16th of August both openings were discharging; the anterior spontaneously, the posterior when pressed. The local symptoms gradually became more favourable and the general health improved, so that in September the boy was able to walk



out. The right side of the chest contracted, and in the month of November was an inch and a half less than the left in circumference. A partial healing of the aperture being followed by some aggravation of the symptoms, it was determined to attempt the gradual emptying of the sac and approximation of its sides. This object was successfully obtained by means of plugs made of sponge, firmly tied with pack-thread, and saturated with wax; matter, which was to the last inoffensive, was thus repeatedly removed from the cavity. The opening healed about the end of January, and the boy has since remained perfectly well.

“ The author remarks that, although *serous effusion* into the pleural sac is frequently removed with little assistance from medical treatment, yet that, in cases of considerable purulent effusion, there is little hope of relief without an operation, which, in most instances, should be performed early, without losing time and hazarding strength by the use of mercury and diuretics. He argues that puncture of the thorax involves no circumstance of peculiar hazard, provided suitable precautions be adopted. Amongst these precautions he urges the expediency of repeating the operation, in preference to removing a large quantity of pus at once, and especially insists on the conclusive evidence which recorded cases afford, that the practice of leaving a canula in the wound is highly detrimental, in consequence of the increase of pleural inflammation and decomposition of the enclosed matter, owing to the long-continued contact of atmospheric air.

“ Dr. C. J. B. WILLIAMS inquired the average age of the patients operated on by Dr. Roe. The success of the operation depended so much upon age, that he was desirous of information on that point.

“ Dr. ROE replied that few of his patients were under twenty, and that some of them were above thirty.

“ Dr. WILLIAMS rose, and said he considered that it would be scarcely right to discuss the paper before the Society without being acquainted more fully with its contents, than the abstracts read by the secretary had enabled him to be. He would observe, however, that the result of Dr. Roe's cases was to him altogether a matter of surprise, as the success was far beyond any thing he had seen in his own practice, or recorded in that of others. If this success were confirmed by subsequent experience, the prospect would be most encouraging. He should not discuss the contents of the paper further, but should refer to several points in connexion with the operation of paracentesis; and first, as to the propriety of adopting measures for the exclusion of air from the pleural cavity during the proceeding. Now, several years since, he had performed the operation in a number of cases, and the result had been invariably fatal. This had been the case also with Dupuytren and many other surgeons, and the consequence had been, that the operation had fallen into disrepute, and opinion was uniformly against its employment. In all the cases alluded to, no attempt whatever was made to exclude the external air, and the canula was sometimes left in the wound. The evil effects were evidently the result of the entrance of air into the chest.

He concluded this from the following facts :—The immediate effect of the operation in all the cases was a very decided relief to all the symptoms ; and in no case of pure uncomplicated empyema was the fluid first drawn off in any way foetid ; and in addition to the immediate relief, the patients seemed as if they would do well. In three or four days, however, symptoms of irritative fever came on ; the pulse became quicker ; the patient was affected with night sweats ; became cachectic ; and died. Now, it was invariably found that the discharge from the wound, whether of pus or air, became more and more foetid as these symptoms progressed ; and, indeed, one condition seemed to bear so complete a relation to the other, that he had no doubt that the cause of both was the same, and that this was the entrance of the air. He had observed this sympathy, particularly in adults, the exceptions to it being in children, in whom, when the discharge and air from the wound were foetid, the constitution did not always appear to suffer in the same degree. It seemed, indeed, that there was greater power in the child than in the adult, to resist the noxious influence of decomposed pus. Fully impressed with the truth of these remarks, in all subsequent operations he had adopted measures for the exclusion of air, and in none of these did the foetid condition of pus come on, nor did any irritative fever occur. He would now inquire whether the operation was an expedient one ? and reply to that question by saying, that it was not so frequently necessary as had been supposed ; and he thought that by-and-by, most practitioners would agree with Dr. Stokes, that it ought not to be resorted to except in cases in which there was pus in the chest. It might be difficult in some cases to decide whether the effusion were purulent or not previous to the exploration of the chest, or of the performance of the operation ; but generally, he thought, the hectic fever, the frequent pulse, and other constitutional symptoms, might decide the question. In such cases, then, when the symptoms were aggravated, when the dyspnoea was urgent, and life itself threatened, he should resort to the operation. When these urgent symptoms, however, did not obtain, and there was reason to think the fluid to be serous, he should be inclined to wait for the effect of remedies. He spoke thus from experience, for within the last few years he had seen many cases (in which, years before, he should have advised an operation), where the oppression of breathing and constitutional disturbance had given way under the use of tonics and slight stimulants. He related the case of a lady, in whom there was effusion into the pleura, accompanied by much constitutional debility. Antiphlogistic remedies, with mercurials, were employed, without benefit, and she seemed to be sinking from the affection. He was called in. It was evident that the system required support ; tonics and slight stimulants were accordingly administered, and from that moment the constitution began to rally, and she eventually got quite well. We did not, he thought, sufficiently consider the fact, that effusion often depended on the low state of the circulation, and that as the strength increased, the effusion diminished. Two objects were sought to be obtained in the operation of paracentesis, the removal



of the liquid, and the prevention of the ingress of air into the chest ; the air irritated and kept up the effusion, and, he believed, by pressure, prevented the expansion of the lung. With the view of preventing this accident, he had practised, and recommended the employment of pressure on the parietes of the chest, which pressure should be continued as long as the liquid was allowed to flow. By this means alone, it was easy to prevent the entrance of air into the pleura ; but other measures had also been employed to obtain the same result. Thus, it had been recommended that the patient should be placed in a bath during the performance of the operation, so that if any thing did enter the cavity of the chest, it should be water. This plan was said to have been successfully employed in Berlin. Another plan was, the employment of an instrument with a valve, which, while it prevented the entrance of air, allowed of the exit of fluid ; but this instrument was liable to be blocked up by the matter. Again, it had been advised that the intestine of a rabbit, or small animal, should be attached to the canula, that the intestine should be placed in water, so that the air would be kept out, and the fluid allowed to ooze out. This plan had the advantage of allowing the wound to be kept open for a long time, and of preventing the necessity of a second operation. The case, however, by Dr. Theophilus Thompson, read that night, proved the value of repeated operations over that of emptying the chest at one operation.

“ Dr. MAYO took occasion to comment on a mixture of calomel with sulphate of quinine, as used by Dr. Thompson, which he considered to be questionable, as one of the compounds might interfere with the other.

“ Dr. CURSHAM made an inquiry respecting the diagnostic differences in regard to increase of size in the chest, in cases of serous and purulent effusion.

“ Dr. THEOPHILUS THOMPSON, in answer to the last question, replied, that he had repeatedly seen the bulging out of the chest, both in cases of serous and purulent effusion, and that he did not consider it a diagnostic mark between the two kinds of fluid. The frequency with which serous effusion was removed by the agency of medicine would make him careful of resorting to operative means for its evacuation. He related the case of a gentleman in whom, after mercurial and other antiphlogistic means had been resorted to, the effusion had been got rid of by the decoction of winter green ; and the case of a boy, in whom calomel appeared to do harm, but who was cured by the employment of spirits of sweet nitre, with demulcent medicines. The objections raised by Dr. Williams had reference rather to the mismanagement than to the use of the operation. These objections, however, shewed the importance of employing the precautions which he had alluded to. He vindicated the combination of remedies which he had employed in his own case, and remarked that the combination of tonics with remedies like calomel was often beneficial.

“ Mr. BENJAMIN PHILIPS spoke from the result of his own experience, which extended over sixteen or seventeen cases, two of which only were purulent, the others being serous. He had seen, in several



of the latter cases, the bulging out of the chest, and he, therefore, did not consider this sign as at all conclusive evidence of the effusion being purulent. It was desirable, if possible, to determine whether the effused fluid were purulent or serous, for, if purulent, the entrance of air might be injurious. When he had performed the operation in cases of hydrothorax, he had frequently observed the air to completely expand the chest, which became as resonant as a drum; but no evil results had followed, and the air had disappeared in a few hours, but by what means he did not pretend to say. His experience with respect to the operation was less favourable than that of Dr. Roe, as in not one case in which he had operated had the patient lived for six months afterwards. In all the cases, immediate relief followed the operation; in many, the relief endured for weeks, but the fluid again accumulated, and tapping was again required. In some cases, in which, however, there was no evidence of inflammation of the pleura, the fluid from the second tapping contained more albumen than that from the first.

“ Mr. HEWET was surprised at the result of Dr. Roe’s cases. He had seen several instances of effusion into the pleura which had been operated upon, and they had all died. The only case which had recovered was one in which nature had effected an external opening for the effused fluid. In cases of hydrothorax there was occasionally such a coating of lymph over the lung, that it could not expand, even though the fluid were entirely removed. In these cases, the exploring needle would fail in detecting the real nature of the case. He related an instance in which a man died of dyspnoea two days after the operation of paracentesis. It was found that the lung was coated with such a quantity of lymph, that it could not be inflated until several incisions had been made into the false membrane.

“ Dr. KINGSTON observed, that Dr. Roe’s results could not be regarded as *opposed* to those of others, as they related to cases differently circumstanced. In those instances of pleuritic effusion, in which paracentesis thoracis had been hitherto performed, it had not in general been resorted to until the constitution had been completely worn out by the long continuance of the disease; whereas the point which Dr. Roe’s twenty-four cases tended to establish was, that although hardly ever successful, when postponed to this late period, it would succeed in the great majority of the cases in which it was required, if performed at a period when the constitution was better able to struggle with the disease, and bear up under the effects of the operation.

“ Mr. LLOYD briefly alluded to three cases in which the effusion, though supposed to be in the pleura, was really external to that membrane. The fluid was evacuated, and the patients did well for a time, but afterwards died of other diseases. He believed that tapping, either in empyema or hydrothorax, never permanently removed the cause of the disease, and that the patients soon perished, either of that or some other disease.

“ Mr. ARNOTT had seen the bulging out of the intercostal spaces as frequently in cases of serous as purulent effusion into the chest. His experience proved that in cases of serous effusion, the entrance

of the air into the chest did no harm, as it was soon absorbed, and gave rise to no bad symptom. When the effusion was purulent, he should not allow more than twelve or fourteen ounces of effused fluid to escape at one time, and he should employ pressure over the parietes of the chest, as recommended by Dr. Williams, to prevent the ingress of air; he thought, however, that when the quantity of fluid removed did not exceed that already mentioned, there could be little fear of air getting into the pleural cavity. He vindicated the combination of quinine with mercury, in practice, as often most serviceable.

“ Dr. WEBSTER passed an eulogium on the paper of Dr. Roe, which shewed the advantage of resorting to the operation of paracentesis early.

“ Dr. HAMILTON ROE, in reply to the observations of the previous speakers, observed, that the first objection urged against the employment of paracentesis, by Dr. Williams, was that of the admission of air into the pleural sac. In the course of the paper he had distinctly stated, that although the admission of air into the pleura, during the operation, was neither injurious in itself, nor mischievous in its subsequent effects, yet that its continued entrance, as in the case of a fistulous opening, had not unfrequently been productive of bad effects. It had been one of the objects of his paper to demonstrate the advantages of operating in the manner practised in the cases he had brought forward, namely, that of withdrawing at once the entire collection of fluid, and immediately afterwards closing the aperture made by the trocar. In cases in which a fistulous opening had been made, either by retaining the canula in the wound, or otherwise permitting the continued ingress of air, unsuccessful results had followed, in the majority of cases to be attributed to the physical changes produced in the pleuritic secretion, by the contact of the air; in many examples of hydrothorax, treated by making a fistulous opening, the effused fluid, before serous, had become purulent, and a severe form of disease was thus induced. A good illustration of this fact had been referred to both by Dr. Theophilus Thompson and himself, in the case which had occurred to Dr. Stroud. The strongest evidence against the old opinion quoted by Dr. Williams, was to be found in the cases related in the paper, in every one of which air entered freely during the time of the operation, yet did no unpleasant effects ensue. He had frequently found the pleural sac immediately afterwards filled with air, producing all the physical signs of pneumothorax, but that a few hours had sufficed for its removal by absorption. He had been surprised at the observation made by Dr. Williams, to the effect that air, admitted into the pleural cavity, was capable of exerting the same amount of pressure on the lung as the fluid previously contained. Experience completely disproved the correctness of the remark, and the observations that had just been made by Mr. Arnot and Mr. B. Philips strictly coincided with the results obtained by himself, that the air admitted during the operation had commonly been removed within a few hours. With regard to the fatal termination of the cases that had occurred under the observation of Dr. Williams, there could be little doubt that their unsuccessful issue



was not in any way dependent upon the mere admission of air into the chest, but that the cause was to be sought for in the period at which the operation had been had recourse to. It had long been the opinion of authors that paracentesis could only be regarded as a *dernier ressort*; and if the cases alluded to by Dr. Williams had been treated in accordance with such views, it was not remarkable that no recoveries should have taken place. In all cases in which the operation had been long deferred, the lung had become so much compressed and atrophied, and its investing pleura so thickened, contracted, and bound down by morbid adhesions, that its future expansion could not take place, and though the collection of fluid might be removed, the lung would be wholly lost as an organ of respiration. If, however, the practice he had advocated were adopted; if the operation were had recourse to at the only period at which it was really of value as a curative means; if it were employed to remove a disease rather than to protract it, very different and far more gratifying results would ensue. Dr. Williams had also stated that the majority of cases of hydrothorax were to be cured by tonics, and that, therefore, the operation of paracentesis was unnecessary. He (Dr. Roe) dissented not only from the assumed fact, but also from the inference deduced. He did not deny that many patients got rid of pleuritic effusions by the use of tonics, after depletory measures had been too actively employed, and that such persons did recover without the operation; but the fact was not less true, that a large number of patients died annually from hydrothorax, even after the employment of all those remedies commonly relied upon as useful in the treatment of this disease. In few, if any, of the twenty-four cases had the operation been employed until other remedies had been unavailingly had recourse to. In reply to the prophetic remark of Dr. Williams, that the operation of paracentesis would cease to be employed in the treatment of hydrothorax, he was fully convinced that it was only required to regard the operation in its true character, as a curative measure, to demonstrate the incorrectness of the opinions which had served to surround this operation by unreal dangers, and to shew, by the record of cases, that it could be almost an exception unsuccessfully (when early) employed. He believed that it would then meet with general adoption, and a very few cases would be met with in which it would be found inadequate to the complete removal of the disease. In the course of his paper, he had especially directed attention to the greater value of paracentesis as a remedial measure, inasmuch as, by its timely employment, not only was the effusion itself removed, but it also relieved the lung from the pressure exercised by the surrounding fluid, by which its proper structure was ultimately destroyed, and its subsequent expansion prevented.

“ Dr. P. M. STEWART, in relation to the combination of calomel with quinine, remarked that Dr. Mackenzie, of Glasgow, was in the habit of employing this mixture in cases of scrofulous diseases of the eye. The state of the constitution, in some cases of accumulation in the pleura, might be such as to render the medicine in question a very desirable and valuable one.



“ Mr. Stanley, had operated on five cases of fluid in the chest; of these, three were collections of pus, two of serum. Three ended favourably, two fatally. With reference to the point at which paracentesis might be most properly and safely performed, it had been asserted by high authorities that the puncture should not be made lower than between the fourth and fifth ribs; and Laennec had recorded two cases in which the puncture was as low down only as between the sixth and seventh ribs; in one of these the diaphragm was wounded, and in the other the trocar passed into the kidney, and the patient died from extravasation of blood into the abdomen. Notwithstanding these results, however, he (Mr. Stanley) had, in two of his cases, made the puncture between the eighth and ninth ribs; the proceeding was successful, and no bad consequences followed.”

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We have not been able to procure the treatise of Dr. KRAUSE,\* and must content ourselves with quoting from a notice of it in the *London and Edinburgh Monthly Journal*, and we are the more anxious to do so, as our cotemporary has extracted from the work strong confirmations of some views advanced by Dr. Mac Donnell, published in the March Number of this Journal.

“ Under the anatomical department,” says the Reviewer, “ he gives some details regarding the nature of the effused fluid, which he divides into three species, the purulent, sero-purulent, and sanguineous. It is difficult, he says, to state with accuracy the numerical proportions of these three varieties; but throwing together single cases, collected by other authors, along with those observed by himself, he finds the first to be of much the most frequent occurrence, and also the least dangerous, whilst, on the other hand, the sero-sanguineous exhibits the most unfavourable results; thus, in 162 cases the effusion was purulent in 100, and the cures were 50; sero-purulent in 41, the cures being 18; and sero-sanguineous in 20, with cures 2. In that part of the work devoted to the causes, we have another table, shewing the relative proportion of its occurrence on both sides of the chest, and also the relative proportion in both sexes, and the periods of life, a summary of which we subjoin. Of 137 cases, 96 were men, 18 women, and 23 children. In both sexes the disease occurred more frequently in the young. Of the 96 men, 51 had not attained the age of 30; of the 18 women, 10 were under the same age. The greatest number of cures occurred in the young. Of the 51 young men, 25 were cured, and of the 10 young women, 5. But the most favourable result of all occurred among children; of the 23 children, 16 were cured. Out of the 137 patients, 81 were affected in the left side, and 56 in the right. Of the 54 cures, on the other hand, 30 were in individuals affected in the left side, and 24 in those affected in the right.”

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\* Das Empyem und seine Heilung auf Medizinischen und Operativem Wege nach eigener Beobachtung dargestellt.—Von DR. ALBERT KRAUSE, Danzig.

“In the interesting Paper of Dr. Mac Donnell, which appeared in our [*London and Edinburgh Monthly Journal*] last Number, it will have been observed by many of our readers that the able author states, that enlargement of the liver very often accompanies empyema, not only when it is seated in the right side, but also when it occurs in the left cavity of the chest. This effect he ascribes to a ‘congestion or engorgement of the liver, analogous to what takes place in cases of morbus cordis, and diseases of the lungs, attended with imperfect aëration of the blood.’ He also remarks, ‘that it has been mentioned by many writers, in their accounts of the appearances noticed at the autopsies in cases of empyema, though unaware of its connexion with the subject.’ In the work before us Dr. Krause remarks, that disease of the liver is but a rare attendant upon empyema, as he has only witnessed it in two of the numerous cases he has seen; in one it was prodigiously enlarged, and studded over with tubercles; in the other case hydatids were found in the viscus. On looking over Dr. Krause’s cases, however, we find, that though in many he makes no mention of the state of the liver at all, merely concluding with the general remark, that the abdominal organs were healthy, yet in those in which he does notice its condition, we find that out of 14 cases where the effusion was in the *left* side, in 4 it is stated to have been congested, in 2 much congested, and in 3 large and congested; of the remaining 5 it is stated to have been hard in 2 cases, large and hard in 1, and softened in 1. In those in which the effusion occurred in the *right* side, out of 6 cases, it was large and congested in 2, much congested in 1, large but bloodless in 1, small in 1, and sound in 1.”

So that out of *twenty* cases of empyema (fourteen of the left and six of the right side) the liver was congested in different degrees in twelve cases.

From the fact of this congestion of the liver having been so frequently observed after death, there can be no doubt that its presence would have been detected in many of the successful cases, had the attention of Dr. Krause been directed to the subject; but as it is, they fully corroborate the statements advanced by Dr. Mac Donnell, and “this condition of the liver must now be considered as constituting an additional feature in the diagnosis and pathology of empyema.” Dr. Krause gives an interesting case of encephaloid disease of the lung, which was mistaken for empyema, which we shall lay before our readers in his own words:

“Nisten Nadolski, aged 40, of a slender make, was admitted into hospital on the 27th February. Up to that time she had always enjoyed good health; had never suffered from chest complaints; and was seized with pneumonia of the right side, which ran its usual course. At the end of four weeks the patient was, by her own urgent desire, dismissed, and although she had still some difficulty of breathing, with purulent sputa, and there was still dulness on percussion at the base of the right side, and want of respiratory murmur. She continued to



improve at home, the cough disappeared, and she gained strength. At the end of four weeks, difficulty of breathing again occurred, the expectoration returned, she became hoarse, and complained of pain during respiration. She was again admitted on the 27th May. There was now considerable emaciation, and pretty smart fever. The respiration was hurried, and the right side a little enlarged. A firm tumour was observed under the right arm-pit, but somewhat anterior, which rested on the ribs, had a natural colour, and was very slightly painful. A vein about the size of a quill spread over it, running down from the arm-pit: the patient had first remarked it fourteen days previously. The glands in the axilla were free from swelling; respiration was heard at the summit and base of the lung, but was wholly absent at the middle portion; percussion was dull over the whole right side, and normal only under the clavicles; the expectoration was considerable, of a dirty green, with a penetrating odour. The state of the patient much the same for some days; she lay continually on her back, and slept little during the night. The tumour continued to increase in size, became livid, and fluctuation was felt. It was opened by means of a bistoury. No pus, however, appeared, but a bloody-coloured serum, and the incision was immediately filled with a grumous, homogeneous mass. There was considerable hæmorrhage from the wound, but this was controlled by cold applications; the strength continued to sink, and she died on the 6th of June.

“When the skin was dissected off the tumour, an encepholoid mass of the size of the fist was remarked; it lay upon the third and fourth ribs, and was in part covered by the pectoralis major and serratus magnus. It could not be separated from the ribs, as it protruded through the intercostal spaces, and had its root within the thorax. On the sternum being removed, a large mass was perceived, filling almost the entire of the right side of the chest. After being separated from its attachment to the parietes, it was removed; on an incision being made into the lung, the middle portion of it was found to be completely supplanted by an encephaloid mass, which had the consistence as well as the appearance of brain, and was traversed here and there by fasciculæ of vessels. The apex of the lung for about the breadth of a hand was in good condition, but compressed. Several small tumours, varying in size from a nut to that of a hen’s egg, were situated in the lower lobes; some rested on the ribs, and on removing them, the former were found to be deprived of their periosteum, but not carious; the cellular texture of the bone was sound. There were no traces of similar tumours in any of the other cavities. The left lung was somewhat œdematous, but otherwise healthy, as were also the heart and liver. The kidneys and the intestines shewed nothing abnormal. The glands of the chest were removed along with the tumour, and could not be found. Those of the neck and opposite side were quite unchanged.”

We regret we have not room to insert two cases of empyema, in one of which the matter escaped through a hole in the diaphragm, and descended down to Poupart’s ligament, where it



presented the appearance of a psoas abscess, and was opened. The boy, however, soon died, and then the true nature of the disease was discovered.

In the second case the matter perforated the diaphragm, and burst into the transverse portion of the colon by two apertures, through which fæces passed upwards into the right pleural cavity, which had been the seat of the disease.

“When an operation becomes necessary, Dr. Krause is decidedly of opinion, that an early period of the disease is not the best, but that it is much more likely to prove beneficial after the tendency to inflammation is somewhat diminished.”

These views are (as our readers may perceive) in direct variance with those of Dr. Hamilton Roe, the success of whose operations affords, in our mind, strong evidence of the soundness of his opinions.

We shall conclude this notice with an extract from one of the Clinical Lectures of Schönlein, published in the *Lancet* for April 28th, 1844.

“I read a few days ago,” he says, ‘in the Austrian Medical Annals (Oesterreichische Medicinische, Jahrbücher, 1841, Januar. Juli), Skoda’s report on the cases of empyema that were treated in his ward for diseases of the chest, and must confess that the facts he makes known, with characteristic openness and sincerity, for he frequently performed the operation, do not tempt us to follow his example. Almost two-thirds of the cases he treated ended unfortunately, for the operation was very soon followed by symptoms of returning pleurisy. Here, in this case, where we are menaced with a complication of delirium tremens, the indications with regard to the treatment are changed, but I confess that the matter is not quite clear to me, and that I am not inclined to come to a precipitate decision, for the following reasons; first, because the apparition of delirium tremens merely threatens as yet, and has not actually taken place: secondly, because, if delirium tremens should really supervene, the operation might have a still worse result, for we know that wounds during the existence of this malady very easily assume a putrid character, and that every operation has an inflammable reaction upon the brain.

\* \* \* “In the account of Skoda and Schuh, which I have cited, a form of effusion into the cavities of the pleura is mentioned, which cannot be distinguished during life, at least as yet, but which, when the operation has been undertaken, not only makes it extremely difficult, but inevitably leads to a fatal termination, and furnishes another reason why I must declare myself an opponent to the operation; this is the case where coagulable lymph swims in the effused liquid. I, for the first time, saw such a case in Würzburg, in an elderly man, on whom Textor, at my request, undertook the operation. After more than a hundred of these flocci had already been evacuated, the flow of the liquid was suddenly stopped. Textor examined the wound with the finger, and thought that it had pene-

trated into the pericardium, on feeling a mass similar to the *cor villosum*, but it was only a convolution of plastic flocci, which, on being pushed back, allowed free egress to the liquid. In consequence of the irritation produced by the remaining flocci on the pleura, violent inflammation was brought on, which terminated fatally. Skoda and Schuh have also cited several similar cases, and undertaken the operation when there was no urgent necessity from the violence of the symptoms; their termination was unfavourable, and on dissection the cavity of the pleura was found filled with coagulable lymph. As yet we have no means of distinguishing the quality of effused liquid, in each individual case during life; it is only to be found out by autopsy. We have, therefore, another reason for not undertaking the operation precipitately. 'But,' it might be objected, 'by stimulating the secretions the flocci which remain after the more fluid part has been absorbed, will produce the same mechanical irritation as after paracentesis.' To this I answer, that experience, it is true, can prove nothing in this question, but that analogy and induction furnish sufficient grounds for invalidating this objection. After paracentesis the emptying of the sac is rapid, and the coagula of albumen and fibrine come into immediate contact with the surface of the pleura, after the evacuation of the water; but we know that the more rapid contact of a surface with a foreign body is, the more violent the reaction becomes, and again, that when it takes place slowly, the reaction proportionally decreases, and sometimes even does not occur at all, or in other words, the irritation gradually wears itself away; this is a universal pathological truth. But we have still another answer to this objection, for in the same way that coagula of blood (for instance, in apoplexy of the brain) are gradually absorbed by the surrounding fluid, so the absorption of the coagula of albumen and fibrine can also gradually take place in this case, and this is a further reason for preferring, to immediate evacuation, the slower process of absorption, by stimulating the secretions."

We have now laid before our readers an analysis of all that has been written within the last few months on this interesting subject. Dr. Hughes and Mr. Cock are strong advocates for the performance of the operation, but do not confine it to any particular stage of the disease. Dr. Williams and Schönlein are opposed to it, but their objections appear only applicable to the advanced stages of empyema. Dr. Hamilton Roe operates early in the disease, and with marked success; and though Skoda, of Vienna, has been cited as averse to paracentesis in *Empyema*, we know that he advocates the operation in the early stage of inflammatory hydrothorax, for we ourselves have seen him perform it on a patient who had been admitted into his wards only a few hours previous to the clinical visit, and who had been but a couple of days ill. In this instance he resorted to paracentesis immediately he had satisfied himself of the existence of fluid in the chest; in this he was, perhaps, too precipitate.



# SCIENTIFIC INTELLIGENCE.

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## PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.

SESSION 1842-1843.

*First Meeting, 26th of November, 1842.*

SIR PHILIP CRAMPTON in the Chair.

1. *Pneumothorax*.—Mr. O'Ferrall said that he had to communicate to the Society a case of pneumothorax, attended with some unusual circumstances; (the recent parts concerned in the affection were on the table). The subject was a female, æt. 40, who had been admitted into St. Vincent's Hospital in the last stage of phthisis, suffering under the tubercular diarrhoea, but with little cough. She gradually sunk, but two days before her death she was observed lying on her side and complained of the sensation of a stitch in the left side, which was found to be tympanitic to percussion; when she sat up in bed, the same clearness of sound was observed posteriorly; there was no displacement of the heart, no sign of pressure from within; there was no metallic tinkling, but there was amphoric resonance; she lived only 48 hours after these symptoms were observed. The body was examined after death; the left lung was found to be small and compressed; in its superior portion was an opening into the cavity of the pleura, anterior and superior to a large tubercular cavity in the lung, with which it communicated. It was remarkable that there was no pleuritis. The pleura was unusually dry. The displacement of the heart had probably been prevented, partly by adhesions of the lung and partly by the low, exhausted state of the patient and the feeble respiratory action. The case then was remarkable, for being one of pure pneumothorax or pneumatothorax, in which there had been no escape of fluid into the pleural sac, because the opening into the tubercular cavity was near its upper part; for there having been no pleuritic effusion, probably in consequence of the short time that the patient survived the accession of the pneumothorax; and lastly for the absence of any displacement of the heart; as there was also the absence of metallic tinkling, it might be worthy of inquiry, whether this symptom is not to be considered as connected only with pneumothorax when there is also effusion into the pleura.

2. *Encephaloid Disease of the Liver*.—Doctor Lees said he had to lay before the Society a good example of encephaloid disease of the liver, taken from the body of a female who had died on the previous



day, in the Hospital of the South Union, into which she had been admitted on Monday week in a state of emaciation and debility, labouring under pleuropneumonia. She was about 46 years of age, and described herself to have enjoyed good health up to three months previous, when she, for the first time, perceived a tumour in the right hypochondrium, which at the time of her admission into hospital appeared very large. This tumour she ascribed to habitual constipation; there was neither ascites nor jaundice, nor had there been at any former period. When the body was examined after death, the liver was found enormously enlarged; the enlargement was principally in the right lobe; the surface of both lobes was tuberculated. Dr. Lees having made a section of the liver before the meeting, shewed that it was pervaded throughout by the encephaloid structure intermingled with the parenchyma of the organ. The gall bladder was implicated in the same disease, and also contained two large, very dark-coloured gall-stones. It was remarkable that during life there had been no symptoms to indicate this extensively diseased condition, except the tumour, perceptible in the hypochondrium. The right lung appeared healthy, but in the left, there was a deposit of the same disease that affected the liver.

3. *Vesicular Polypus of Os Uteri*.—Doctor Montgomery said that he was indebted to Dr. Lees for the opportunity of producing to the Society a specimen of a very interesting form of disease, which had been the subject of his observations on two former occasions. The disease was the small vesicular polypus of the os uteri; the present specimen occurred in the uterus of the patient just alluded to by Dr. Lees. Dr. Montgomery observed, that the mode of growth of this polypus was peculiar; it consisted in an enlargement of the muciferous glands near the os uteri. It has been remarked that the polypus rarely exists alone, there being usually another high up within the uterus, but in this case there was but the one. There is often great difficulty in extirpating polypi of this kind, either by excision or ligature; in such cases Dr. Montgomery has found that they may frequently be destroyed by strong astringent solutions introduced through a bent glass tube, so as to be applied directly to the morbid growth. He had met with one case where this was successfully effected, but in which the patient had ultimately fallen a victim to another uterine disease; both in that case and the present the patients were unmarried, and there was atrophy or non-development of the ovaria, which in this instance were not larger than those of a child three years old.

4. *Cerebral Apoplexy; Extravasation into lateral Ventricle; red Ramollissement*.—Doctor Corrigan laid before the Society a preparation of the parts concerned in a case of cerebral apoplexy; there was a very large clot of blood occupying the right ventricle and protruding into the left. When the skull was opened, some slight serous and sanguineous effusion had been observed under the arachnoid, over each hemisphere, the tissue of the brain itself was if anything rather

firmer than usual, and was studded with red points; on cutting down to the right ventricle the clot was found, which was so large that it protruded, as could be seen in the preparation, into the opposite ventricle. It had broken up part of the optic thalamus and corpus striatum, and even occupied the posterior cornu; there was no effusion at the base of the brain. At a little distance from the clot was a spot of red ramollissement. It had been a question among pathologists whether this condition is precedent to, or consequent on the extravasation of blood; Dr. Corrigan thought that this case, with some of those recorded by Abercrombie, would prove that it follows the extravasation. The subject in the present case was a woman who had suddenly fallen down, and was brought to the Whitworth Hospital on the 14th of November in a comatose state, very cold and with a pulse scarcely perceptible. On the next day she rallied a little, but was observed to be paralyzed at the left side; the paralysis was both of motion and sensation, and this Andral has considered a decisive symptom of blood having been effused. This patient continued conscious for two days and then sunk. In this case the effusion had been very sudden, and Dr. Corrigan thought that it might be useful to contrast it with another form of apoplexy, exemplified in a case that he had formerly attended along with Dr. Stokes. The subject was a gentleman who one morning at breakfast time was observed to be incoherent in his speech, somewhat bewildered and confused in recollection. The same symptoms were again observed at a later period of the day, and continued in the same manner for two or three subsequent days, when paralysis of the upper extremity occurred. In this case two distinct effusions of blood were found, and the brain was in the state of white ramollissement, which was probably indicated by the disturbance of the intellectual functions which preceded the effusion and paralysis.

5. *Aneurism of the Abdominal Aorta.*—Dr. Hutton said he had to communicate a case of aneurism of the abdominal aorta. The subject, Patrick Lynch, was æt. 50, who was admitted into the Richmond Hospital on 21st April in the present year. Two months previous to his admission, he was seen by Mr. Monahan, who found him pale and emaciated, complaining of pain in the loins, and in the left testicle, passing down into the thigh: there was a slight fulness in the loins; the pulse in the femoral artery was not diminished. When the stethoscope was applied posteriorly to the spine, a single soufflet was audible. From this examination Mr. Monahan diagnosed aneurism of the aorta; another gentleman, two days afterwards, considered the case to be one of lumbar abscess, having omitted to examine with the stethoscope. In a month after Mr. Monahan had made his examination, a pulsating tumour became apparent in the loins, which in the course of another month had attained an immense size, reaching from the crest of the ileum up to the inferior margin of the scapula; much of the enlargement was sudden, and attended with a sense of faintness. At this period the soufflet had become less audible, the pulse in the left femoral was diminished, the bowels



were constipated, there was little or no suffering from neuralgic pains, and there were no cramps in the lower extremity. After he was admitted into Hospital, diarrhœa set in, and he sunk rapidly. It appeared that before his admission, he had been treated for renal disease, had been cupped on the loins, &c., and he stated when he came into hospital that he believed his complaint was disease of the kidney. In ten days after his admission he died in a state of syncope, and had been jaundiced for two or three days previously. No deformity of the spine had been noticed during life, but when the body was examined after death, curvature in more than one direction was ascertained. [Dr. Hutton exhibited a cast of the parts, illustrating the relations of the tumour, which occupied the region of the psoas muscle, and shewing the situation of the orifice in the aorta adjacent to the bodies of the vertebræ. He also produced the spine itself, attached to the pelvis, prepared by maceration.] The spine had been eroded by the aneurism, and the blood had nearly reached the canal; the bodies of the vertebræ and the inter-vertebral cartilages were in several places absorbed. The tumour had pressed on the lobulus spigellii, and on the ascending vena-cava, which was empty; the right cavities of the heart were also empty.

6. *Porrigo, or Tinea Capitis*.—Dr. Corrigan said he wished to direct the attention of the Society to some drawings of porrigo, or tinea capitis, which he had there for their inspection, and to illustrate his observations on the disease. The true porrigo he considered to be a very rare disease, and incurable by any means as yet ascertained. In the course of eight years he had met with but three cases of it, all of which were in the lowest and most destitute classes; he had never seen it in private practice. Several diseases had been confounded under the name porrigo, and hence quacks frequently got the credit of curing the incurable disease, when they had in fact only met with some of those more manageable affections which were confounded with the genuine porrigo. The diseases liable to be confounded with it were these:—impetigo of the scalp; eczema impetiginodes, and porrigo decalvens, which is not a pustular disease at all. The true porrigo is accompanied by a languor and imbecility which approaches to idiotcy: when, by poultices, detergents, or other means, the scalp has been cleaned, and a red surface produced, the disease always reappears on it in the form of distinct, white, solid pustules, round and depressed in the centre; these had been found to consist of phosphate of lime and albumen. He had seen a case of the genuine disease in an adult, who had in vain travelled to every hospital almost in England and Ireland, with the hope of being cured. The appearance of the disease in his case was well expressed in one of the drawings. In fact, all the medical attendant can do in the treatment of this disease is, to keep the surface clean, but the eruption is sure to return, and to affect the mental faculties, as he had already observed.



Second Meeting, 3rd of December, 1842.

DR. MONTGOMERY in the Chair.

1. *Cancer gelatineuse of the Abdominal Viscera.—Dropsy.*—

Dr. Bigger said he had to lay before the Society a recent specimen of a disease which is not often met with. It had been described by Cruveilhier, and is the Cancer gelatineuse of the French Pathologists. In the present case it pervaded all the abdominal viscera. The subject was a female who had first come under his notice about four years ago. For several months she was affected with almost incessant vomiting; there was anorexia, thirst, want of sleep, and in short every symptom indicative of prominent organic disease, with the exception of pain, which was absent. At the end of a year the malady had increased very much; she had become unable to swallow solid food, and could with difficulty swallow liquids—in fact œsophageal vomiting came on whenever the bulk of more than half a teacup full of any sort of food was taken in. Subsequently to her having been under his care, she had been under that of his friend Mr. Nunn for two years. Early in the second year of the disease dropsy made its appearance, to relieve which diuretics, mercurial and other remedies were used, but without success. Towards the last period of life the inanition had become extreme: both ingesta and egesta were very small in quantity, and the egesta from the bowels were frequently intermixed with transparent hydatids. The patient continued to sink, and a fortnight ago expired. Her friends would not allow any of the cavities to be opened except the abdomen, and the examination was very hurried. There was much fluid in the abdomen; all the viscera were covered with small gelatinous hydatiform bodies, which existed even in the omentum and mesentery. The stomach was very small—there was a considerable thickening about the cardiac orifice—the tissues of the stomach were altered in character—the muscular coat was diaphanous, and had lost all the characters of muscle—the œsophagus was concerned in the disease, which was ascertained by passing the finger up into it during the dissection.

2. *Pericarditis.*—Dr. Corrigan said the case he had to communicate was one of pericarditis, which he considered to be a good example of the pathology of the disease. The subject was a boy, æt. 18, who was admitted on the 3rd of November into the Hardwicke Fever Hospital. The expression of his countenance was remarkable, and led to the suspicion that pericarditis existed; there was that slight contraction of the brow which often accompanies the disease. There was slight œdema of the integuments in front of the region of the heart, an appearance for which different causes are assigned, some attributing it to a serous effusion under the skin. To the left side of the sternum the integuments were swollen and smooth, and the entire of that space was dull on percussion. On the 18th of November, the respiration was hurried and rapid—the pericardium had suddenly become distended. After this he was for some time relieved by the

treatment adopted, but on the 29th he was jaundiced; his pulse was extremely rapid and feeble; he continued to get worse, and died yesterday. For a few days previous, a bruit de soufflet was audible. [Dr. Corrigan exhibited a cast of the upper part of the body after the thorax was opened, the sternum and cartilages of the ribs being removed, showing the thoracic viscera *in situ*. The parts themselves were also on the table]. When the thorax was opened, the pericardium was observed to be enormously distended, reaching upwards as far as the first rib. The heart itself was coated with a pulpy lymph, which on some parts might be compared to the appearance which would be presented by oil or viscid matter interposed between two opposite smooth surfaces, which were afterwards drawn asunder. Dr. C. having cut into the left ventricle, shewed that there was a slight thickening of the edge of the valves. There had been in this case a very loud bruit de frappe, which was most remarkable when the patient lay on his back: when he sat up or leaned forward it was diminished, and sometimes altogether disappeared. These circumstances are important, as they distinguish this sound from the bruit de soufflet, with which it is liable to be confounded. There was no soufflet until the latest period of the disease, shortly before death.

3. *Sub-arachnoid Meningitis of Cruveilhier*.—Mr. O'Ferrall laid before the Society the recent specimens and accurately coloured drawing, illustrating a case which he said exemplified very well the obscurity which involves the diagnosis of affections of the brain. The subject was a female admitted into St. Vincent's Hospital, suffering under an abdominal abscess that occurred after parturition, presenting the symptoms usual in such cases. A very large fluctuating tumour appeared in the lower half of the abdomen; this, after some time, pointed in the right labium, which at last gave way, and the contents were evacuated. The tumour disappeared; the patient appeared to be convalescent, and did well for several days. After eight or ten days from the closure of the opening, she was observed to be remarkably dull, but did not complain of any pain; however at night she complained of headach, screamed suddenly, and fell out of the bed. She was raised in a comatose state, in which, with little variation of symptoms, she remained for forty hours, during which deglutition was very difficult, and the discharges were involuntary. Death occurred on the second day after the attack: the case was evidently one of coma and collapse, without any previous state of excitement. When the cranium was opened, the arachnoid appeared healthy, there was no opacity, no deposition, but underneath the serous covering, and in some places between the convolutions, there was a semi-liquid deposit, which varied in appearance from white to yellowish; there was none at the base nor at the lateral parts of the brain. In the ventricles were four or five drachms of fluid. The substance of the brain was firm. Mr. O'F. considered it an interesting question for discussion, whether this was a case of meningitis, or of deposit consequent on the abdominal abscess? Most authors agree in describing such a case as one



of meningitis, yet Marshall Hall warns us against inferring the existence of inflammation from the circumstance of a deposit being found under the arachnoid, even if the deposition contain lymph; because, as he relates, he has found this in cases of anæmia and of delirium tremens. It is very difficult (Mr. O'Ferrall observed) to determine what symptoms are pathognomonic of meningitis. Lallemand considers them those of excitement, while, on the contrary, Cruveilhier describes them to be torpor, coma (with the absence of pain), delirium, or convulsions. Andral states that there are none of those symptoms that may not be either absent or present in meningitis, and that the stage of excitement may be so transient as to escape observation, or in other cases that it may be protracted so long before the occurrence of coma, that it will appear to constitute the whole character of the affection. This, however, is but an attempt to reconcile together opposite opinions—the difficulties still remain. According to Dr. Bright's opinion, this was a case of meningitis, and some period of excitement must have occurred. Mr. O'Ferrall concluded by observing, that the case was very interesting, both on account of the short time the disease had existed, and the difficulty of deciding whether it was meningitis, or an affection connected with a previous purulent deposit.

4. *Tuberculated Liver*.—Dr. Mollan said the specimens he had to present to the notice of the Society, were taken from the body of a female 80 years of age, who had been twenty years a patient in the Richmond Lunatic Asylum. Three weeks before her death she became jaundiced, but there was no pain, no vomiting, no febrile disturbance. The liver presented a remarkable state of disease, its substance being pervaded by innumerable cancerous tubercles, some of which were softened. The gall bladder was filled with gall-stones. A very large gall-stone was found in the duct. In this case during life there was no suffering correspondent to the extent of the diseased condition discovered after death: this is a circumstance often observed in lunatics. In this patient's case, there was only some diminution of the usual appetite for food, and an increased degree of emaciation in addition to the icteric symptoms. In the head there was no appearance of disease, with the exception of a slight opacity of the arachnoid membrane.

5. *Abscess behind the Pharynx; entrance of Air into the veins*. Mr. R. W. Smith said the preparation which he then exhibited to the Society was from a female, æt. 60, who was admitted on Tuesday last into the Richmond Hospital. The history of her case was this: on the previous Saturday in the act of deglutition, a bone had stuck in the pharynx where it remained fixed for about three hours. Up to the last moment of life she was unable to swallow solids. On admission into hospital she complained of pain in the throat (not in the larynx); she was watchful and did not sleep. At the right side of her neck a tumour was observable, it was variable in size and evidently contained both air and liquid. On Friday the pharynx was minutely examined, and a tumour was observed projecting into its lower portion.



The tumour was punctured with a trocar and some air escaped from the wound; in a few minutes afterwards she fell back and expired; the veins of the neck were distended with air.

When the body was examined after death, a large abscess was found situated behind the pharynx and œsophagus, extending into the posterior mediastinum. It had burst by numerous small openings into the œsophagus, and had also infiltrated with purulent matter all the loose reticular tissue between that canal and the vertebral column. Mr. Smith considered that in this case the fatal disease had originated in the injury done by the foreign body to the mucous lining of the pharynx, from which the abscess rapidly resulted. The veins had been eroded and opened by ulceration. He would deduce from this case and from the previous observations of Doctor Fleming the necessity of a careful examination of every abscess occurring behind the pharynx, and also that they should be punctured in a very early stage. In the present case the death was caused by the entrance of air into the veins, a mode of termination that had not been observed before in similar cases.—(*Museum, Richmond Hospital.*)

*Third Meeting, 10th of December, 1842.*

DR. MONTGOMERY IN THE CHAIR.

1. *Dislocation of the Thumb.*—Mr. R. W. Smith said, the preparation which formed the subject of his communication to the Society, was one of great interest to the surgeon. It was a case of dislocation of the thumb, which had been sent to him by Surgeon Brabazon, of Downpatrick. Every surgeon was aware of the extreme difficulty of reducing dislocations of the thumb. The most frequent occurrence of that kind is the dislocation in which the first phalanx is luxated on the dorsum of the metacarpal bone. In the present case, the second phalanx was luxated on the dorsum of the first. The accident had happened to a man holding a horse by a long rein; the horse started off suddenly, and the man was thrown to the ground, with which his hand came into contact in such a manner, that a compound luxation of the thumb was produced. [Mr. Smith exhibited a drawing of the appearance it presented.] The head of the first phalanx was forced through the integuments. The flexor tendon was forcibly displaced, and lay between the first and second phalanges. It was evident that reduction would have been very difficult, if not impossible. Mr. Brabazon was apprehensive of tetanus ensuing; he therefore preferred amputation, which he performed by cutting through the first phalanx with a bone forceps.

Mr. Smith then produced a cast, and drawing of the dislocation of the first phalanx of the thumb on the metacarpal bone, usually described as Hey's luxation. It would be seen that there was a prominence towards the palm; the first phalanx was at a right angle with the metacarpal bone, or nearly so. This was the more common species of dislocation of the thumb, and is very difficult to reduce

In the case represented by the cast, a surgeon had proposed an operation which, from the patient's description, Mr. Smith supposed to have been to cut down on, and remove the head of the bone; this the patient refused to submit to, and the luxation remained unreduced.

As to the immediate cause of the difficulty of reduction, there were various opinions. Hey conceived it to be the wedge-like shape of the metacarpal bone, but this Mr. Smith considered could not be the cause, because there was equal difficulty of reducing the luxation, the reverse of Hey's, where the metacarpal bone is luxated on the dorsum of the phalanx, and where, consequently, the shape of the bone could not offer the same obstacle; of this, which is an exceedingly rare accident, there is a case recorded by Velpeau, where he failed in effecting reduction, and where Roux was equally unsuccessful. Mr. Smith approved of the explanation given by Mr. Adams in the *Cyclopædia of Anatomy*, that it is not owing to any mechanical obstacle, but to the violent vital contraction of the numerous small muscles of the thumb. Another alleged cause was, that sufficient extending force could not be applied, but this is evidently incorrect, for cases have occurred, where in the attempt to reduce, extending force had been applied, and continued to such a degree, that the second joint had been completely torn away from the limb.—(*Museum, Richmond Hospital.*)

2. *Aneurism of the Arteria innominata*—Mr. Hutton presented a preparation and illustrative drawing of a case of aneurism of the innominata, in which the distal operation had been tried. The subject of the case was a man named Fleming, aged 47, who had been in good health up to March 1841, when he was attacked by pain in the right shoulder and clavicle, and which gradually affected also the neck, ear, and side of the head. This pain, which at first occurred only at intervals, after some time became constant. In June a cough came on which was dry and recurred in fits. After this had continued for several days he began to expectorate. These symptoms were succeeded by difficulty of swallowing, and severe neuralgic pains. In November his loss of health and strength had become remarkable, and there was then perceptible a small pulsating tumour under the cleidomastoid muscle. He was admitted into the Meath Hospital, and was there subjected to Valsalva's method of treatment, but with very little benefit. In April, 1842, he presented himself at the Richmond Hospital; the tumour was then situated close to the sterno-clavicular articulation, a little to the outside of the sternal attachment of the sterno-cleidomastoid muscle; there was no soufflet; the right radial artery felt as if its canal was somewhat diminished, and the pulse was somewhat less in it than at the opposite wrist; there was bronchial cough and difficulty of breathing; it was observed that the dysphagia became less as the tumour had risen above the sternum. After his admission into the hospital the pulse at the wrist became gradually smaller, the tumour continued to in-



crease in size, and passed across the middle line of the neck; its longer diameter, which was two inches, lay across the neck, while the diameter from above downwards was but an inch and a half. The patient was quite aware of the fatal tendency of the complaint, and also of the uncertainty of averting it by operation, yet he readily consented that the operation should be performed. On the 27th of June the operation was accordingly performed, by tying the right carotid opposite to the cricoid cartilage; he became very faint when the ligature was applied, but after this faintness there set in a strong reaction; the pulse, at the time of the operation, was from 50 to 70. On the next day it had risen to 110, but the tumour, which had collapsed when the artery was tied, did not resume its former dimensions. On the second day after the operation, the tumour appeared still diminished in bulk, and the pulsation in it was less. The fever was gradually subsiding, and the patient getting better in every respect, when he was attacked by bronchitis; for several days after this had been subdued the progress of the case appeared favourable, the difficulty of breathing became less, and the tumour was becoming smaller. However, on the 22nd day after the operation, there was hæmorrhage from the wound to the extent of about six ounces; the hæmorrhage was controlled by pressure. In five days after this hæmorrhage again appeared, but to the amount of not more than two ounces; a steel collar was then applied, with a pad, in the manner suggested by Surgeon Peile. On the thirtieth day after the operation, the ligature was found loose, and there was considerable discharge from the wound, to an extent far disproportioned to the surface of the sore. On the thirty-sixth day he had an attack of diarrhœa, which was at that time epidemic; unfavourable symptoms gradually supervened. On the thirty-eight day he had rigors and convulsive motions resembling epilepsy; on the following morning a thick, dark-coloured fluid was discharged from the wound, but without jet. On the forty-first day the rigors recurred. On the forty-second, the tumour was evidently increased in size, and the sputa more bloody; from this time the tumour gradually enlarged, and the pulsations in it became more frequent. On the sixty-fifth day there was a sudden enlargement of the tumour, accompanied by syncope. On the seventy-sixth day he died. When the body was examined it was found that there had been no attempt at union in the artery, it had ulcerated through at the situation of the ligature; above this point there was atheromatous deposition in the vessel; the aneurismal tumour contained purulent matter and grumous blood; the coats of the innominate were thickened; the tumour projected into the trachea, and had there been perforated with a very small opening, through which the blood had passed into the trachea and lungs; the lungs were slightly emphysematous; the aorta was not dilated, but there was atheromatous deposit between its coats; the left vertebral artery came off from the arch of the aorta; the left subclavian was healthy; on the right side the carotid was filled by a large conical coagulum of about an inch in extent. In the right subclavian was a coagulum evidently older than



that in the carotid; it extended from the origin of the vessel to where the vertebral is given off, but it was pervious into the sac of the aneurism; the right subclavian was diseased in the greatest part of its course. The wound made in the operation had become a fistulous opening, and the aneurismal tumour had, by its enlargement, nearly reached the external orifice.—(*Museum, Richmond Hospital.*)

3. *Intestine protruded throughout abdominal Parietes during a Paroxysm of Hooping-Cough.*—Mr. Adams presented the specimen, and also a cast, taken by Mr. Smith, from the parts *in situ*. The case was a very unusual one, being a protrusion of the intestines (to an extent of about six feet of the tube) which had occurred to a child ten years of age, in consequence of a violent paroxysm of hooping-cough; it was not, however, a simple case of hooping-cough, the child, who was very delicate, greatly emaciated, and neglected by its parents, having also laboured under Pott's curvature of the spine, and an intra-inguinal hernia, in front of which was a chronic abscess with a fistulous aperture. The case was first seen by Mr. Duignan, the resident pupil at the Richmond Hospital. He found the child at the abode of the parents, who were poor people; it had been vomiting, and was then lying on its back, with the legs drawn up towards the body: there were all the symptoms of peritoneal inflammation present, and when the bed clothes were removed, it was discovered that there was a protrusion of the intestines in the right groin. The account given was, that the child on the previous night had screamed suddenly after a violent paroxysm of the cough; immediately on which the mother observed the intestines protruded, but instead of sending for assistance, covered them with a weight of bed-clothes. Mr. Duignan desired the child to be sent into hospital, but this the mother pertinaciously refused. The protruded portion of intestine was at this time in a state of inflammation, very tender, and coated externally by a dirty ash-coloured lymph. While an attempt was made at reduction, more of the intestine was protruded. About noon the case was seen by Drs. Adams, Power, and Macdonnell; there was then about a foot in length of the intestine protruded, and the lymph thrown out on it was, as well as the intestine itself, of a dark livid colour; reduction was impracticable. At eight in the evening the case was evidently hopeless; the child was cold, nearly insensible. However, Mr. Adams and Dr. Hutton determined to make an attempt at reduction, although they could not prevail on the mother to send the child into the hospital. The case was obviously one from which no surgeon could expect to derive any credit, there being peritoneal inflammation in addition to the protrusion of the intestine, and every possible unfavourable circumstance being combined in the previous condition of the child's health, and the obstinacy of the friends against its being sent into the hospital. Mr. Adams and Dr. Hutton considered that the case might be viewed as one of wounded parietes of the abdomen, with protruded intestine and stricture at the internal opening, which ought to be divided; a director was introduced and a short incision made, when the child suddenly screamed and struggled

violently, and it was thought better to proceed no further with the operation. It might be supposed by some, that an incision should have been made to lay bare the ring, and then the reduction proceeded with *secundum artem*, but this would have done no good unless the stricture at the internal ring was divided. The case furnished an example of the effect of the violence of the whooping-cough, aided by peculiar coincident circumstances. Mr. Adams remarked, that a similar resistance and struggle against reduction of protruded intestine is sometimes exhibited by adults, for instance, in persons wounded in the abdomen during inebriation. The surgical anatomy of the present case shewed the propriety of Sir A. Cooper's direction to cut upwards in dividing the stricture about a strangulated hernia; in this case an incision downwards would have wounded the iliac artery, while one inwards would have divided the epigastric. Should a similar case ever again occur to him, he would lay open the whole course of the canal and dilate the internal opening.—(*Museum, Richmond Hospital.*)

4. *Pleuropneumonia; Subarachnoid Effusion, and Engorgement of the Brain, subsequent to extensive Burn.*—Mr. O'Ferrall said that at the last meeting he had communicated to the Society an instance of a cerebral affection, supervening on an enormous abdominal abscess. The specimens he had now to lay before them belonged to a case in which a cerebral affection had been consequent to a severe external injury, a very extensive burn. It had been observed of such cases, that death may occur either within the twenty-four hours immediately after the injury (being the period of collapse), or it may happen in the second period; or perhaps not till after the eighth or tenth day. The subject of the present case was a girl nine years of age. She was brought into St. Vincent's Hospital on the sixth day after she had met with the accident. She was severely injured, the arms, chest, neck, face, &c., being all more or less burned, and exhibiting every variety of burn described by Dupuytren, from mere vesication to the deepest eschars. She was in a state of extreme excitement, with depression of the vital powers. She lived but a short time after her admission, and died during the night. On examining the body, there was found extensive pneumonia of the left lung; the pleuræ were also inflamed, and had lymph recently thrown out on them. Some portions of lung were solidified, and there was a general condition of engorgement. Within the cranium there was a great turgidity of the vessels on the surface of the brain, so great that it was perceptible through the membranes; the vessels might be compared to leeches in appearance. There was a minute ramiform vascularity over the surface of the convolutions, and numerous red points were observable on the section of the substance of the brain. There was subarachnoid effusion. There were many interesting inquiries connected with the subject of this affection of the brain. Did it arise from a sympathy with the more remote injury to the surface, as some of the phenomena during life might lead us to believe? It was certain, however, that death might be the result of these secon-



dary lesions. As to the treatment of such cases, there was great difficulty in determining on it; the state of collapse, or general depression of the vital powers, renders depletion unadvisable, and in the period of excitement, there are often circumstances which still forbid it.

*Fourth Meeting, 17th of December, 1842.*

MR. O'FERRALL, M. R. I. A., in the Chair.

1. *Perforating Ulcer of the Stomach—Adhesion of Stomach to the Liver.*—Mr. Hamilton observed, that pathologists are acquainted with three species of ulcers of the stomach. The first are small, of irregular figure, appear like abrasions, and are found in the middle of the stomach. The second, or aphthous, are usually very numerous; they are minute, and of a circular form, with well-defined edges, looking as if a bit of mucous membrane had, in each instance, been cut out. The third sort, which is more common than either of the others, is the simple chronic ulcer. The patient from whom the present specimens were taken, was a female, æt. 28, who had suffered gastrodynia during the last four or five years. The pain was increased after eating, and was often accompanied by vomiting of the ingesta along with a fluid matter, which sometimes was acid, sometimes acrid, or salt. Her colour was a pale straw, and she was emaciated. She had occasional intervals of ease, which, on one occasion, when she was pregnant, lasted during the entire period of gestation. In last May she had a violent attack, which was followed by hæmatemesis; there was also pain of a severe kind in the region of the liver, and at the tip of the right shoulder, so that the medical attendant who was at that time called in, considering it to be a case of hepatitis, prescribed venesection, and the use of mercury. After this she got much worse. About a week before her death, Mr. Hamilton saw her; in five or six days after this, he was again sent for suddenly. He was informed that she had drank some porter, and was eating an apple, when she was seized with sudden and very severe pain at the epigastrium, which extended over the abdomen. Mr. Hamilton found her screaming with pain; the abdomen was hard, the muscles strongly contracted, and there was no tympanitic sound on percussion. She complained also of pain in both her shoulders, particularly in the right, where it was very severe. No remedy that was tried gave any relief. In the evening she had become stupified by the use of opium, but there was still no relief; the pulse was very rapid. Mr. H. concluded, from all the symptoms, that it was a case of perforating ulcer of the stomach, and escape of its contents into the cavity of the abdomen. The pain after some hours appeared to be principally in the hypogastric region, and the desire to pass water became very urgent, yet none was discharged; the catheter was introduced, and the urine drawn off, but in very small quantity, the bladder having been by no means distended. On the following morning she was evidently moribund, and the abdomen



had become remarkably tympanitic. She died in twenty-four hours from the commencement of the attack. After death the body was examined; it was extremely emaciated, but the abdomen was enormously swollen and tympanitic. On laying it open, a brownish fluid, in which were scattered some small portions of apple, was found in the peritoneal cavity; a little lymph had been effused on the intestines, but generally they were transparent and healthy looking. The spleen and the liver were pale; on rising up the left lobe of the liver, a circular opening was discovered in the parietes of the stomach; it was situated in the lesser curvature, near the cardiac orifice; about the opening lymph had been effused, by which an adhesion was formed to the liver. In the centre of the opening lay a fragment of the core of an apple; the opening from the interior aspect appeared of an oblong form, the longest axis being from above downwards, and the greatest extent of the perforation being in the mucous membrane. The stomach generally was pale.

2. *Bilocular Bladder*.—Mr. Porter presented a specimen of a bilocular bladder. The history of the case was this. On the 27th of November he was applied to by a man suffering great distress from retention of urine; this person had been sent in from the country, and stated that on the preceding day, as he was unable to pass water, a surgeon had introduced a catheter, and drew off a small quantity of urine, which appeared quite healthy; at night the same surgeon was again applied to, and attempted to introduce the instrument, but then found that he could not pass it into the bladder; some blood came away on making this attempt. Mr. Porter having attempted to pass a small sized catheter, found that he could not reach the bladder; he then sent the man to the Meath Hospital, and there succeeded in passing one of a larger size with which he drew off a quantity of healthy urine; ever since that occasion the urine had changed in its appearance; it was putrid and mixed with bloody and purulent matter; the man gradually sunk and died. The parts were carefully examined after death, when it was ascertained that there was no false passage, in fact nothing abnormal, until the bladder itself was reached, which appeared to be double, consisting of two chambers of different magnitudes, communicating by a small aperture just large enough to admit a quill; the ureters and urethra opened into the lesser chamber, which was in a very diseased state, its lining membrane was corrugated and very thick, and covered over with sabulous deposit; the larger chamber had the structure of the bladder; the ureters were dilated and contained healthy urine; the prostate was slightly enlarged. It was evident from the specimen, that the catheter could only have emptied the smaller cavity, and the constant presence of the urine contained in the other, must have caused great irritation.

3. *Chronic Hydrocephalus*.—Mr. Adams presented a preparation and drawings of a case of chronic hydrocephalus. He observed that there was a similar case at that time in the Richmond Hospital,

and that there had been some discussion as to the propriety of attempting to relieve by paracentesis of the cranium. It would be recollected that three forms of hydrocephalus were recognized, besides which many more were described by French authors, and there was also the encysted, described by his friend Dr. Houston. The preparation belonged to a case of both external and internal hydrocephalus co-existing in the same individual, the external hydrocephalus was at the right side, the internal at the left; the fluid contained in the sac of the arachnoid compressed the hemisphere towards the mesial line. The drawing was produced for the purpose of exhibiting the peculiar appearance of the eyes, the cornea being almost completely concealed by the lower eyelid. In this case the heat of the head externally was remarkable, and the superficial veins were distended. As to the success of the proposed operation of paracentesis, Mr. Adams said he had no hopes, unless in the case of the hydrocephalus externus, in case it could be diagnosed, which, in the present state of our knowledge, he feared was impracticable.—(*Museum, Richmond School of Medicine.*)

4. *Acute Inflammation of the Knee and Shoulder Joints succeeding to Small-Pox.*—Mr. R. W. Smith brought before the Society the case of a child four years of age, who had been under the care of Dr. Hutton in the Richmond Hospital. This child had been attacked by small-pox, which proceeded through its regular course, but in ten days afterwards the child became affected by severe pain and swelling of the knee joint. In two days after this it was admitted into hospital; there was then considerable swelling about the joint, which appeared to be distended with fluid; the epiphysis was evidently separated from the shaft of the femur; the pulse at the wrist was very rapid, the countenance anxious, and there was great prostration of strength. An incision was made over the inner condyle by which a quantity of purulent matter was discharged from beneath the periosteum. In two days afterwards the shoulder joint became similarly affected, and rapidly filled; the pain became very severe; the child was constantly screaming; diarrhoea came on, then coma, and finally death on the eleventh day of the disease. When the parts were examined after death, there was found acute inflammation of the synovial membranes and of the periosteum in the neighbourhood of the joints; all the surrounding tissues were more or less engaged in the inflammation; the epiphyses had completely separated. In one of the knee joints the cartilages had a cribriform appearance; this, Mr. Smith observed, he had often met with in cases where the bone had been acutely inflamed. There was extensive destruction of the humerus; the periosteum was inflamed over half the length of the shaft, and there was new bone thrown out in some spots. The glenoid cavity of the scapula was covered with recent lymph, but the cartilages remained sound. There was no purulent deposition in the internal organs.—*Ibid.*



*Fifth Meeting, 31st of December, 1842.*

MR. O'FERRALL, in the Chair.

1. *Eccentric Hypertrophy of the left Ventricle—Aneurism of the ascending Aorta.*—Dr. Bigger said the specimens which he had to lay before the society at that meeting were taken from the body of an athletic man, who had formerly been a soldier, but who had been invalided about nine years ago, ever since which time he had been affected with violent palpitations. He had been under the care of numerous physicians and surgeons during that period, and had undergone every variety of treatment, but without benefit. He had been frequently salivated, had been bled very often, and had been blistered until the skin was no longer capable of vesication. On Christmas Day he was admitted into the Adelaide Hospital, at which time he had been seventeen nights without sleep. His countenance was very pallid, but he still retained a considerable degree of muscularity, he was incapable of taking any solid food, and complained of pain in the epigastrium. He was suffering intense dyspnoea, and was obliged to be supported in a nearly upright position. The heart was pulsating strongly and extensively; there was a strong impulse perceptible over a great part of the surface of the chest; both sounds of the heart were audible; the pulse at the wrist was from 95 to 100; superiorly in the chest there was fremitus; the apex of the heart could not be distinguished; the posterior part of the thorax on left side sounded dull, and the crepitus of pneumonia was audible in the lung; anteriorly on the same side, the respiratory sounds were drowned in those of the heart, as if that organ completely filled the whole of the anterior part of the thorax on the left side. On the right side of the chest there were audible, along with the respiratory murmur, subcrepitant and bronchial râles intermingled. The first sound of the heart was not abnormal, the second was shorter, and was accompanied in its latter part with a loud bruit de soufflet. The diagnosis in this case was that there existed dilatation with enlargement of the cavity. There was clicquement along with the second sound (and Dr. Bigger had observed in several cases which had come under his notice, that the second sound is synchronous with the passage of the blood through the aortic valves). The patient died during the week. When the body was opened, it was found that the heart filled up the space indicated by the dulness, and the violent pulsation during life. The heart completely filled the pericardium. The left ventricle was of enormous size. The aortic valves were capable of closing, but there were some bodies which to the touch felt like wire, enclosed in their tissue. The aorta between the heart and the middle of the arch was suddenly enlarged into a cavity of cartilaginous and of osseous structure. This enlargement terminated suddenly by a narrowing at the very middle of the arch, and this was probably the cause of the soufflet concurrent with the second sound of the heart. The descending aorta was of small calibre in proportion to the size of the individual. The right side of the heart was dilated and filled



with fibrine. In the enlargement of the aorta just described, there was a clot, with all the characteristics of that found in aneurisms, passing through all the gradations of consistence, from firm fibrine in contact with the parietes of the dilatation, to grumous blood towards the axis of the artery. This aneurism would probably have burst, had the man's life been protracted. The left lung contained a fine example of pulmonary apoplexy, whose situation could be detected by the touch before the lung was cut into. The stomach was vascular, and its mucous membrane was softened. The patient had vomited near a quart of blood and mucus on the night before his death.

2. *Multilocular Aneurism at the Base of the Brain.*—Mr. R. W. Smith said, the specimens he then produced to the Society were from the body of a man, æt. 54, who was admitted in March, 1842, into the Richmond Lunatic Asylum, under the care of Dr. Mollan. He had been insane during three years previous. In hospital, his insanity was characterized by great excitability, and disposition to complain, with occasional paroxysms of violent excitement. Six months before his death, he was attacked by spasmodic fits, in which the hands were strongly clenched; they were sometimes of an epileptic character. His hearing became gradually impaired, but there was no paralysis. On the 12th of December, 1842, he was found in a state of complete prostration, with respiration very slow, but not stertorous; was delirious, but could reply to questions, although not readily; pulse natural. He died on the 14th, but without having been affected by either coma, stertor, or convulsions. When the skull was opened, there was found considerable turgescence of the vessels of the membranes; the brain itself was of small size, and soft. At the base of the brain, towards the left side, was discovered an aneurismal tumour, about the size of a small apple; it occupied the floor of the third ventricle; the tuber cinereum had been destroyed, as well as the origin of the optic, and of the olfactory nerve of that side: the optic nerve of the opposite side was flattened and softened. The aneurism was multilocular; the posterior artery of the cerebrum was traced into the sac; it had, perhaps, originated in a branch of the basilar artery.

The middle artery of the cerebrum opened into the aneurism; a similar circumstance had been described by Serres, who had recorded two cases of aneurism within the cranium, one of the basilar artery, the other of the communicating artery. There was also a case by Cruveilhier, and Mr. Smith himself on a former occasion had communicated another case to the Pathological Society. The symptoms during life in such cases are very obscure, and it is as yet impossible to diagnose what may be the compressing force within the skull, whose existence is indicated by the symptoms. It is remarkable that in all the cases yet observed, there has been deafness, a symptom unexplained by the pathological phenomena. These tumours are, however, of slow growth, and all contain laminated coagula; their structure shews that they are true aneurisms, and they produce death,

either by rupture and extravasation, or by disorganization of the cerebral substance by their pressure.

3. *Phlegmasia Dolens; Interlobular Pneumonia; Purulent Cysts in the Ventricles of the Heart.*—Dr. Stokes presented the recent specimens taken from the body of a male patient who had died of phlebitis, in whose case there were several points of interest, to which, in connexion with the specimens, he begged leave to direct the attention of the Society. It was an instance of chronic phlebitis, and was complicated with other morbid phenomena. The subject of the case had been for two months under his observation in the Meath Hospital, and during that time there was no intermission of the symptoms. The history of the case was this: the subject was of Italian parentage, and had been a Temperance Society man for some time, but had broken his pledge, and become addicted to drinking. When he was admitted into the Meath Hospital, he presented many of the appearances of delirium tremens, and gastric irritation, with a certain degree of fever. Mr. Parr, the intelligent apothecary of the hospital, who examined this patient very carefully, detected the existence of pneumonia in the right lung. The pulse was very rapid, ranging, while he was in the hospital, from 130 to 150; it was but once during that period observed to be so low as 120; this remarkable quickness of the pulse continued up to the time of death. The other important phenomena of the case were these: there was, during the entire period, disease of the inferior portion of the right lung, progressing slowly, and obstinately resisting treatment, a circumstance which agrees well with the characters of specific irritation; there was a persistent crepitus audible in the lung, which varied so as to be at some times much smaller than at others; at the root of the lung there was bronchial respiration; there were all the symptoms of dry pleurisy. That there was also phlebitis was indicated by the condition of the left leg, which had the appearance of a limb that had been some time affected with phlegmasia dolens. This patient died at last completely exhausted and broken down, appeared quite anemic, and had all the symptoms that might be expected to occur in a case of purulent poisoning of the blood. The principal results of the examination after death, were exhibited in the specimens then on the table, which Dr. Stokes proceeded to describe. The abdominal vena cava, and the veins of the lower extremities, were carefully examined. In the cava was found a coagulum adherent to the lining membrane of the vein, which, when the coagulum had been detached, was observed to be in that situation slightly red and villous; this redness was quite decided; the surface of the coagulum was rough. In the femoral vein were similar clots, and in the thigh the artery, vein, and nerve were all agglutinated together; the canal of the saphena vein was obliterated, and felt hard, like a cord; this obliteration extended as far as the vein was traced, but was most remarkable in the lowest branches. These appearances were in the left limb. As to the heart, the right ventricle contained



a number of small white tumours between the carneæ columnæ; these tumours are the same as those which Mr. O'Ferrall has met with, and designated *purulent cysts of the heart*. There were some dark-coloured coagula and creamy matter in this ventricle, but its lining membrane presented none of the anatomical characters of inflammation. In the left ventricle were similar deposits of purulent matter, contained in cysts; their contents were of a creamy consistence. There were three large cysts in this ventricle; they adhered very slightly to the parietes of the heart. The inferior lobe of the right lung was solidified; a section of it, made when it was recent, exhibited a marbled surface, resembling red granite. In every part of the lung that was cut into, there was an analogous matter, to that found in the heart, and sometimes granular points. There was a general phlebotic inflammation of the lung, but no abscess had been formed within it; there were similar deposits in the upper portion of that lung, and also in the lung of the opposite side, with some intervening portions of healthy tissue, agreeing with the interlobular pneumonia of Andral and Cruveilhier, a name which is objectionable, as conveying an improper idea of the nature of the disease. It is very remarkable that there was no purulent deposition in the liver, spleen, kidney, joints, or muscles. This case, observed Dr. Stokes, was one of those of phlegmasia dolens which are most dangerous. Of that disease, all the cases that occurred might be arranged in two classes; in one, the first obvious symptom is the rapid swelling of the affected limb; in the other, which is by far more serious, there are severe constitutional symptoms long before the leg becomes tumified. Cruveilhier had observed, and Dr. Stokes's experience enabled him to confirm the observation, that the most dangerous cases are those which arise from a poisoning of the blood; when the disease is localised, there is a chance that the patient may recover. It was worth while to consider whether the condition of the lung which he had just pointed out, depended on a mechanical deposition, or was the result of a specific irritation of the lung. He thought it more probable that the latter was the case, which would be most analogous to what occurs in other specific inflammations. He would add, that as to the diagnosis of such cases, perhaps it would be made from observing the obstinacy against remedial means—at least, all those we are at present possessed of. He was not, however, without hopes that a specific remedy might yet be discovered.—(*Museum, Richmond Hospital.*)

4. *Erysipelatous Inflammation, extending to mucous Membrane and Air Passages, subsequent to a Wound on the Head.*—Mr. R. W. Smith said he wished to present a specimen taken from the body of a middle-aged man, of intemperate habits, who on last Tuesday evening had received a wound on the head, but how inflicted was not known. It was a large flap wound of the scalp. The man was in the first instance brought to an apothecary, then to a barber, then to a police station, and finally to the Richmond Hospital, where



he should have been brought at first. On the following day erysipelas came on, and delirium, with other bad symptoms, and he died on Thursday, within forty-eight hours from the receipt of the injury. The fever in this case was typhoid in its character, and very rapid in its progress, the tongue swollen, dry, and brown, and the wound on the head sloughing. On opening the head, there was observed an increased degree of vascularity in the brain. In the fauces and bronchiæ the mucous membrane was highly vascular; this redness is still visible in the trachea. The lungs were congested, and easily broke down under the finger. The liver presented an example of cirrhosis, and there was ascites. The rapidity with which this case ran on to its fatal termination was remarkable. Mr. Smith believed that the erysipelas had extended from the cutaneous surface to the mucous by the mouth and nares; there was as yet no sub-mucous infiltration.

5. *Necrosis of a Rib.*—Mr. R. W. Smith said, he had also to present a specimen which had been transmitted to him by his friend, Mr. Brabazon, Surgeon of the Infirmary at Downpatrick. The specimen was a portion of the sixth rib in a state of necrosis, which Mr. Brabazon had extracted from a boy who was sinking under hectic when brought into the Infirmary; an aperture had been formed which led down to the afflicted part, and through which matter was discharged. The cough, and other hectic symptoms rapidly disappeared, and the patient was recovered in a short time after the operation.

*Sixth Meeting, 7th of January, 1843.*

DR. O'BEIRNE in the Chair.

1. *Softening of the Brain.*—Dr. J. F. Duncan exhibited the recent parts in this case. The subject from which they were taken was a female, aged about twenty-four years, who had been an inmate of the North Union Workhouse for the last two years and a half. She had an apoplectic attack in Manchester, where she was employed in a factory; was afterwards a patient in Jervis-street Hospital, where she remained six months, until, her case appearing to be a hopeless one, she was sent into the workhouse. When she came in there, she was completely helpless, was unable even to feed herself, had lost the use of her limbs, and had aphonia. An issue was opened on the vertex, and other remedial means adopted, after which she for some time got better, but soon relapsed, and lost the use of the left side. On Wednesday fortnight she had an epileptic fit, and another on last Wednesday. During the whole progress of the case there had been no complaint of pain. In the examination after death, the skull was observed to be very thick, the arachnoid was in some spots opaque, and slightly thickened; the substance of the brain in the upper part of both hemispheres was very firm, but when the base of

the brain was examined, part of the anterior and middle lobes on the right side was found to be in a state of ramollissement. There was some effusion into the ventricles.

2. *Ovarian Tumours containing Teeth and Hair*.—Dr. Houston exhibited to the Society a specimen of ovarian disease, which he received from his friend, Dr. Irwin, of Castleblaney, and of which the progress and final issue were, perhaps, unique. The tumour was as large as an orange. It consisted chiefly of hair, bone, and teeth, and had been extracted from the anus. The patient was a countrywoman, named Dawson, æt. about 50, and the mother of seven living children. For nine years she had been subject to continued lumbar and rectal pains, with alternations of constipation and diarrhœa. For the last two years she had suffered from constant uneasiness, and draining of blood and mucus from the rectum: and in order to allow the bowel to be emptied, she had been obliged, on every occasion of going to stool, to introduce her finger and push aside some resisting body which obstructed the passage. In this state she applied to Dr. Irwin, about eight months ago. After making a careful examination, Dr. Irwin judiciously determined on an attempt at extracting this foreign substance, whatever it might be. He succeeded in pulling a certain amount of it through the external opening; but then found it stopped by a fold of the mucous membrane, which embraced it tightly round the centre, where the mass appeared narrowed by a circular contraction. He then divided the mucous membrane with a scalpel at this part, and was pleased at finding the entire come away unbroken. The mucous membrane was vascular and relaxed; some bleeding occurred from the wound of the knife; but it was arrested by plugging the rectum. It was through the lateral and posterior wall of the rectum that the tumour made its way into that bowel. The woman quickly recovered, and remains (eight months) quite well in health, and free from any disease or inconvenience in the rectum. Such, Dr. Houston said, was the account given to him of this singular case by Dr. Irwin; and it now remained for him to describe the tumour, and to offer a few observations on the reasons which would, he thought, justify him in regarding it as ovarian.

The tumour, when first examined, was about the size of a large orange, narrowed about the centre. It was heavy and dense, and emitted a fæcal odour. One end, the larger, presented an appearance like dried clay, matted together with hairs. The other, somewhat smaller, was equally dense; the latter was covered with a firm, gristly substance, like that of the gums, and presented on one side the enamelled crowns of several teeth. The two pieces were so firmly joined together, as to constitute one solid mass. On being macerated for several weeks, the exact nature of the tumour became more manifest. The smaller end [Dr. H. here exhibited the specimen] was found to consist of a perfect organized bone, a sort of misshapen lower jaw, with eleven teeth growing out of it, in sockets, and not in a continuous row, but irregularly jumbled together in one place, as close as they could lie. There were two incisors and one canine tooth; the rest were bicuspid and early molars. The teeth were all



tolerably perfect, some being a little bent, and others short. The enamelled crowns were sharp and well-defined. The larger piece, of which the mass was composed, was of a totally different nature. According to an analysis made by Dr. Aldridge, it consisted of a mass of hairs matted together by ammoniacal magnesian phosphate, biliary matter, and vegetable detritus. It adhered very firmly to the osseous piece, especially to the projecting extremities of the teeth, some of which were broken off with it in attempting a separation of the two portions. This end of the tumour was obviously the more recent production, and, according to Dr. Houston's opinion, must have been formed in the rectum by the slow accumulation of the fæcal, excrementitious deposits, arrested by the hairs and teeth of the primary tumour, which, in being eliminated from the body, had been brought into contact with, and had produced ulceration in the tunics of the rectum. The operation of Dr. Irwin was, in this case, therefore, only the completion of the last stage of the tedious, but sanatory and well-directed efforts of nature to the same end. Dr. Houston remarked, that as the woman, the subject of this tumour, still survives the discharge of it, there must remain some doubt as to its source. He thought, however, that its origin had been in the ovarium, and gave a lengthened exposition of the nature, causes, and most common seat of such tumours, with a view of proving, from precedent and analogy, that such was the fact.

3. *Acute Inflammation of the Pia Mater, with Inflammation of the Cerebrum.*—Mr. Adams said, I beg leave to lay before the Society the case of a young lady, aged 23 years, who had laboured under acute inflammation of the brain and its membranes, for eleven days. The case terminated fatally, and its well marked symptoms, melancholy to relate, were, from the beginning to the close, never combatted by any mode of treatment which science should have dictated, or even common sense suggested. During the first four days of this illness, her family did not conceive any medical advice necessary, and on the fifth day of it she was placed under the medical care of an eminent professor of homœopathic medicine, who continued to attend her daily, and daily to pronounce a favourable prognosis as to the probable issue of the case, until four o'clock on Monday, the tenth day of her illness, when she became affected with violent convulsions. On Tuesday, the 2nd of January, the 11th and last day of her illness, I was desired to visit her. I found her comatose, and *in articulo mortis*; her death took place a few hours after my visit. I obtained leave to make a post-mortem examination of the brain; the result I beg leave now to lay before this meeting, and as but three days only have elapsed since the examination, the brain and pia mater still preserve nearly the same anatomical characters of inflammation they then presented; the Society can bear testimony to these appearances, and to the faithfulness of these drawings, executed by Mr. Conolly, of the inflamed brain. No one who looks upon this specimen I hold in my hand, can doubt that most acute inflammation of the brain and its membranes must have in this case existed, and when we hear the clinical history of



this case, we shall feel reason to be surprised at the apathy of the family of the young lady the subject of it, who could look on patiently and permit such acute symptoms as I have to relate to continue, without their having recourse to other advice, or seeing that these symptoms were combatted by some more energetic measures than those they saw adopted in this melancholy instance. The following particulars of the progress and treatment of this case I very carefully collected on the spot, partly from the family, and partly from a very experienced and intelligent nurse, who for the last five days had never left the patient's bedside.

I learned that on the 24th December, 1842, that is, on this day fortnight, the young lady first complained of being unwell and chilly; on this day she had driven to Dublin with her sisters, and on her return home in the evening, took a shivering. On the 25th (Christmas Day) she was still complaining; remained in her room, not being able to join the family circle this day at dinner. On Tuesday the 27th, she was considered better, and was down stairs in the drawing room, but became very unwell, fainted, and was carried up stairs to bed nearly insensible. On this day she mentioned to her sisters that she saw objects double. None of these symptoms alarmed the family, or induced them to procure any advice, until Wednesday, the 28th of December, when they called in to visit the young lady an eminent professor of homœopathy, who had been occasionally in attendance on the family. He took charge of the case, and from day to day, that is, from Wednesday until the following Monday, pronounced that the case was one of fever, and going on favourably. On this day, however, she had a violent convulsion. The testimony of the nurse was, that she had not seen the young lady until Friday night at ten o'clock, the 30th of December, 1842. On her arrival she found her very restless, and she passed a very disturbed night. "She would fall into a doze and awake frightened, and would shrink back in the bed as if she saw something she would avoid: she did not complain of pain now, but her forehead felt very hot, her tongue was white and coated, her pulse used to 'come and go'"—was irregular—"her head seemed heavy to her; when she was raised up in bed, her head fell on her shoulder." She was delirious throughout the night. What she said was rather amusing, and would make herself as well as those about her laugh. Upon asking the nurse to particularize what she thought her mind was occupied with, as far as she could judge from her words; she replied: "She seemed to be occupied (mentally) in her Sunday school, teaching children, whom she would call by name; she would ask for her dress and her boots, to go out, and inquire why the car was not brought round, but there was much variety in her delirious thoughts; she would begin with a religious hymn, and before it was concluded, she 'gambolled' off from this to something quite different." On Saturday night she was more disturbed and restless; she would get up in bed and cough, say she saw something shining, and *objects of a vast variety of hues and colours*; all the time her head would fall on her shoulder,

if it was not supported ; she said she saw her sister double. When the basin stand, which stood alone in the corner of the room, was shewn to her, she said she saw distinctly two basin stands." On Sunday night the nurse thought the young lady exceedingly ill ; she passed the night in the most restless manner, and had not what she could call one hour's sleep ; she informed the family, and afterwards the Doctor, who, notwithstanding, this morning (namely, the 3rd January, 1844), stated the young lady was better that day, and was going on favourably ; however, at four o'clock, P. M., the young lady was seized with a violent convulsion, which lasted for one hour. After this she fell into a snoring sleep, and subsequently, up to the time I saw her, never exhibited any signs of intelligence, if she excepted, that when a tea-spoonfull of fluid was placed in her mouth, she swallowed it. The nurse thought she could not see ; she lay in a tranquil but comatose state all Tuesday, up to the time of my visit. As to treatment, I learned from the nurse that the Doctor would take a small white powder, like one grain of calomel, and would mix this in twenty desert-spoonfuls of water ; he desired the nurse to shake this very well, and give a desert-spoonful every hour. He would change the medicine now and then ; but to her it all appeared the same, and she could not observe any effect from any medicine she took ; she was not bled in any form, had not been blistered, her hair was left untouched, and no cold lotion was applied until she was insensible. After the convulsion on Monday, the nurse had been with her from this day until her death, at half-past eleven on Tuesday night, and the bowels had not been affected until just before her death ; the secretion of urine was natural, as to quantity and quality ; the bladder was evacuated naturally twice in the twenty-four hours, she herself giving notice to the nurse, until the convulsions occurred. The case was said to be one of typhus fever. The Doctor allowed at first a few grapes, but afterwards forbid even these ; she wished for chicken broth, whey, and, subsequently, on Monday, for dry toast, none of these allowed. Such was the history of the case and treatment I learned on my first visit. I stated to the friends my conviction, that a few hours would close the scene with respect to this young lady ; that my impression was, that the case had been one of acute inflammation of the brain and its membranes, and that all medicine would, at that period, of course, prove unavailing ; that they were quite in an unnecessary state of alarm relative to typhus fever, and the spread of infection, which, in this case, did not exist. I requested that I should be informed when her death took place, and that a *post mortem* examination of the brain and its membranes, in this case, should be permitted. At eleven o'clock on Tuesday evening, the 4th, she died, and on Thursday, 5th January, 1843, I was informed that if "*I had any curiosity*" to examine the body, I might do so. I said that I did feel an interest in the matter, and, accompanied by my friend, Doctor Mayne, I examined the head. The body was remarkably well-formed, was not much reduced in flesh ; the skin of a natural colour, except on the back, from gravitation of blood ; no specks or spots on the skin.



The calvarium removed, the dura mater presented a remarkably congested appearance; when this was cut all round, the pia mater exhibited a greater degree of redness than either Dr. Mayne or I had seen for a long time; the sulci, between the convolutions, were occupied by greatly distended veins; the brain was firm and large; there was no arachnoid inflammation, but the traces of inflammation of the pia mater were most intense; the scarlet colour, from the minute injection of the vessels of the pia mater, was not confined to the surface of the brain; but the portions of this membrane, which sink between the convolutions, was equally red, and quite as brilliant in its colour, as that on the surface; much bloody serum was found in the lateral ventricles and spinal canal; the choroid plexus very much swelled and inflamed. We next inverted the brain, and removed it, that we might examine carefully the optic nerves and the basis of the brain, as from many of the symptoms, particularly the "double vision," we judged we should here find evidences of very acute inflammation. The arachnoid (which, in the natural state, about the commissure of the optic nerves, is remarkably transparent and distinct, and easily detached from the nerves of this region)—the arachnoid was identified with the pia mater and with the neurilema of the optic nerves. The notes taken, while Drs. Mayne, Power, and I were examining it, were as follows:—great vascularity of the pia mater, covering the under surface of both hemispheres; minute vessels so congested, as to give the appearance of scarlet cloth nearly; this appearance not merely limited to the surface, but the same vascularity can be traced into the pia mater, lining all the sulci, and when the membranes are removed, the grey substance of the brain presents everywhere a striking pinkish hue. The superior and inferior intersulcal veins are distended everywhere with black blood. The pia mater, from the pons forwards, where it invests the mammillary eminences, tuber cinereum, and optic commissure, is greatly congested, and so identified with the arachnoid that the two membranes cannot be separated from each other. On pulling off the membranes, the tuber cinereum seems soft, pulpy, and has acquired a pinkish hue, instead of the pale grey colour which is natural to it. The same remark as to colour and consistence applies to the optic tract, commissure, and nerve; and, in addition, all these latter structures appear larger than usual, and the outlines of pinkish vessels can be seen traversing the medullary substance. The tubercula quadrigemina are remarkably congested and pulpy.—(*Museum, Richmond Hospital.*)

4. *Tubercular Infiltration of the Lung.*—Mr. Hamilton produced the specimens in this case, and mentioned that the subject from which they were taken was a boy seven years of age, of scrofulous appearance, with swelled glands in the neck. About five months ago, he had remittent fever, and after that scarlatina, but his convalescence was not complete. He had cough, became emaciated, had night sweats, and other symptoms of hectic. Mr. Hamilton, on seeing him, was struck by the remarkable disparity which appeared between the two sides of the thorax, the right appearing to be much



larger, and the ribs not moved up and down in respiration, as those of the opposite side were. By measurement he ascertained that the right side was the larger, exceeding the left by an inch; the two inferior thirds of the thorax on the right side sounded dull to percussion, but respiration was still audible. In the left side the respiration was puerile, and accompanied by a sonorous râle. Posteriorly, the stethoscope detected œgophony. The sounds of the heart were normal. The diagnosis formed from this examination was, that there was effusion into the pleura, and solidification of the lung on the affected side. In a few days afterwards the boy died, and the following appearances were observed in the examination after death. In the right pleura, there was found about half a pint of fluid, and the lung of that side appeared a uniform greyish white mass, in fact, a perfect specimen of tubercular infiltration; there were numerous adhesions to the pleura costalis, and inferiorly to the diaphragm; the convex surface of the liver adhered firmly to the diaphragm. The left lung was studded with miliary tubercles. The pericardium adhered closely to the heart, and the surface of the heart itself was covered with tubercles. Tubercles were also found in the liver, in the spleen, in the small intestines, and in the omentum; the kidneys were the only viscera in which they were not detected. The bronchial and œsophageal glands were filled with a caseous matter.

5. *Foreign Body accidentally lodged in Larynx.*—Mr. R. W. Smith exhibited the larynx of a child, six years of age, whose death was occasioned by a nail which it had in its mouth, and had accidentally swallowed; the nail, which was one of the common brass nails used by upholsterers in covering chairs, did not pass into the œsophagus, but got into the larynx, where it became fixed, and occasioned suffocation. The child in this condition was brought to the Meath-street Dispensary, where Surgeon Richey used every means for its relief, but in vain. It was at this time completely asphyxiated. Mr. Richey opened the trachea; a gush of air came from the lungs through the incision, but no inspiration followed, although inflation of the lungs was resorted to. The nail was found in the situation in which the Society would observe it in the specimen before them, lying in the larynx, with its point upwards in the sinus of the ventricle of the larynx, and its head downwards below the glottis. Mr. Smith observed that we should not be deterred by the result of this case from attempting to restore animation in cases of asphyxia from similar causes; some cases were recorded, in which, after tracheotomy or laryngotomy, the lungs had been successfully inflated, even when no air had gushed from the wound.

6. *Double Pneumonia.—Epileptic Convulsions.—Meningitis?*—Mr. O'Ferrall said that he had on several former occasions directed the attention of the Society to the difficulty of making an accurate diagnosis of some obscure affections of the brain. His present communication related to the same subject. A child three years of age was brought under his notice; it was suffering from double pneumonia, but on the sixth day convulsions set in, which were preceded

by an increased degree of lividity, and by slight delirium. The convulsions resembled epilepsy, and death ensued in fourteen hours after their appearance, but there was no comatose state after them. When the body was examined after death, the usual lesions consequent on inflammation of both lungs were found. Of the appearances within the cranium there was a very accurate delineation in the drawing that he then produced. The brain itself was not unusually soft; there was no subarachnoid effusion, but there was an extreme degree of hyperæmia; the sinuses were filled with black blood, and there was great vascularity in the sulci. There was no fluid in the ventricles, nor at the base of brain. The question then arose for the consideration of the Pathological Society,—could this be looked on as meningitis? if this was decided affirmatively, the case might be considered to correspond with the meningitis which Andral has described as fatal in the stage of excitement; but should such appearances as those observed in the present case be considered decisive evidence that meningitis had existed? The opinions of pathologists were various; some would assert that the black blood circulating in the system, on account of the state of the lungs, was the cause of the convulsions, and that there had been no meningitis, but only such a state of the brain and of its membranes, as would accompany epilepsy from any cause.

*Seventh Meeting, January 14th, 1843.*

SIR HENRY MARSH, Bart., M. D., in the Chair.

1. *Acute Necrosis of the Tibia*.—Doctor Hutton presented the recent specimens. The subject was a child nine years of age, who on the 24th of last November was suddenly affected with excruciating pain in the upper part of the tibia. On the third day from this, it was brought to the Richmond Hospital, at which time there was great pain in the part, swelling, tension, and a slight blush; the knee joint was also swollen. As it was evident that there was effusion, not only into the joint, but under the periosteum, an opening was made by incision on the anterior aspect of the tibia, and some fluid evacuated, which was followed by some mitigation of the symptoms; but in the course of the two or three following days an abscess formed, contiguous to the knee-joint, but not communicating with it. This was opened and its contents discharged without at all affecting the swollen appearance of the joint. Subsequently the child exhibited an extreme degree of irritability, attended by thirst, anorexia, and febrile symptoms. During three or four weeks a number of abscesses were formed in succession about the knee-joint, but of these only one at the inner condyle communicated with the synovial cavity; the epiphysis had separated from the shaft of the bone. Splints were then applied, and with apparent benefit. In this way matters went on until the 7th of this month, when the child fell into a state of coma, and it died



with all the symptoms of hydrocephalus. On opening the skull it was observed that there was considerable subarachnoid effusion, and several spots of opacity on the arachnoid itself. When the affected limb was examined, it was found to have been the seat of acute necrosis. There was an opening into the synovial capsule. The upper part of the tibia was extensively necrosed, and its cancellated structure diseased. The sequestrum of the tibia had the appearance of the original bone, but was not of the same thickness, and immediately under (or within) it was a granular membrane, attached to an inner cylinder of bone, which, as well as the lower part of the shaft of the tibia, had still retained its vitality. This membrane, Dr. Hutton observed, can be traced along the whole line of the diseased portion. The first appearance of the specimen might mislead an observer as to the seat of the disease, but a very careful examination had convinced Dr. Hutton that it was the external part of the bone which had been destroyed, while the periosteum, and the medullary membrane, with the interior of the bone attached to it, had been preserved. At first sight it looked as if a thin sequestrum had been interposed between the inner and outer surfaces of the bone; the smooth surfaces of the sequestrum externally shewed that it was the outer part of the tibia that had been necrosed. Doctor Hutton having alluded to the opinions of several authors on this affection of bone, observed what he had himself remarked, that in young subjects, inflammation of the periosteum is very frequently accompanied by separation of the epiphyses, and this in several limbs. Cases illustrative of this combination had been already presented to the Society in former Sessions by Mr. R. W. Smith. The present case was remarkable for the rapidity of its course, the epiphysis having been completely necrosed in six weeks from the commencement of the disease, and also for the subsequent inflammation of, and effusion within the serous membrane of the brain. —(*Museum, Richmond Hospital.*)

2. *Scrofulous Tubercles in the Cerebellum.*—Mr. R. W. Smith presented a coloured drawing of the brain of a child nine years of age, admitted into the Richmond Hospital in last May, having been ill for the previous seven months. In September, 1842, it was remarked that this child had become greatly inclined to remain in the recumbent posture; during five months before its admission to the hospital it had suffered severe pain in the forehead, which was exacerbated at night; it screamed frequently, and the head required to be supported. At the time of its admission the look was vacant, the pupils were dilated like those of an amaurotic patient; they were insensible to light; the hearing remained unimpaired; there was inability to either walk or stand up; of sight all that remained was the power of distinguishing light from complete darkness; the abdomen was tympanitic, and there were frequent vomitings; there were no convulsions, and gradually this patient passed into a semicomatose condition, from which, on the 14th of June, there appeared a favourable change; the child became able to stand up and to walk about; the pain in the head ceased; the stomach



no longer rejected its contents, and the patient became lively and intelligent. After this favourable state had continued ten days, the unfavourable symptoms again returned. On the 24th of June there was incessant vomiting, and on the 26th death took place, unaccompanied by convulsions. During the last two days there was paralysis of motion, but not of sensation. The results of the examination of the body after death were these: there was effusion of blood into the ventricles of the brain; the brain itself was very large; the foramen commune anterius was dilated. In each lobe of the cerebellum was one scrofulous tubercle as large as a nut. The bones of the head were very thin and diaphanous. Scrofulous tubercles were thickly deposited in the mesentery. The tubercles found in the cerebellum were of a greenish yellow colour, of a firm consistence, and had a laminated structure like that of a calculus. These tubercles are observed generally to have this arrangement. In one of Cruveilhier's plates there is a figure exactly resembling the present specimen. These tubercles often exist of a very large size without producing any obvious symptom during life, but frequently there is present some one remarkable symptom, such as strabismus or vomiting; the vomiting is often treated as proceeding from some disease of the stomach. The alteration in the condition of the general health, and its sudden variations, such as were observed in the present case, are known to occur also in many cases of spinal affections, in which also tubercles are not unfrequently met with in the cerebellum. It is extremely difficult, if not impossible, to diagnose these obscure complaints; the symptoms are not modified by either the size or the structure of the tubercles, unless when they irritate or disorganize the cerebral tissue.—(*Museum, Richmond Hospital.*)

3. *Scirrhus of the Lung*.—Dr. Stokes presented a specimen of cancer of the lung, for which he observed that he was indebted to Mr. Shannon, Surgeon of the South Union. The subject from which the specimen was taken was an old man, who for a long time had suffered from a cancerous ulcer on the face. Although the lung was affected by cancerous disease, there was not, during life, any decided symptom of any pulmonary lesion, unless that Mr. Shannon found that the right side of the chest was rather dull on percussion. Still, although the disease might be suspected, there was no pathognomic symptom of its existence. The present specimen was one of great interest; there had, on former occasions, been presented to the Society examples of encephaloid deposition, but no specimen of that organ affected by true scirrhus had as yet been laid before it, nor had Dr. Stokes himself ever met with such a case before the present. In this specimen the upper part of the lung was very hard, difficult to cut, and the act of cutting it produced a grating sound; it was, in fact, of an almost stony hardness. There was a well-marked line of distinction between this indurated portion and the rest of the lung, which was infiltrated with a gelatinous matter of a greyish colour. This gelatinous deposition appears to be the earliest stage of the cancerous disease; to this suc-

ceeds the condition of induration, and then that of ulceration, a state not yet arrived at in this instance. In most cases where the deposition of cancerous matter in the lungs is extensive, the pleural cavities are obliterated, a circumstance which proves that irritation is associated with this deposit of heterologous matter. The absence of such symptoms as pain is also usual, and has been already remarked on former occasions in this Society. There were some spots of ossific deposit within the coats of the aorta, near the origin of the innominate. In the descending aorta there was incipient ulceration. The cancerous ulcer on the face had been originally indurated, and there were cancerous warts on the surface which, in progress of time, might have become cancerous sores. As to the diagnosis of these cases he would remark, that they might be considered as forming three species. In the first, the external cancer precedes the internal; those are the easiest to diagnose, for in them any evidence of organic change in internal parts may be taken as evidence of their being affected by cancer. The second species is that in which some internal organ is affected before the cancer has exhibited itself externally; and a third species is that in which only the internal organs are affected, and the cancer does not engage any part of the external surface. Of both these the diagnosis may be very obscure.—(*Museum, Richmond Hospital.*)

*Eighth Meeting, January 21st, 1843.*

MR. ADAMS in the Chair.

1. *Polypus of the Uterus.*—Dr. Montgomery presented to the Society a specimen of polypus of the uterus, remarkable for its size, and attended by some unusual circumstances. The operation by which it had been removed was performed by Dr. Cusack, to whom he was indebted for the specimen. The patient had suffered from uterine disturbance during the last five years, and her complaint had been pronounced to be inversion of the uterus. On her coming to town, and consulting Dr. Cusack, the true nature of the complaint was recognized; the pelvis was completely filled by a tumour as large as the child's head at birth; the diagnosis was difficult, but as the tumour was larger than the inverted uterus would be, and as the patient had never borne a child, Dr. Cusack decided it to be a uterine polypus, and that its immediate removal was necessary. It was determined that it should be removed by ligature, and the application of this was very difficult. It was applied by Dr. Cusack, and in four or five days afterwards it was tightened by Dr. Montgomery. On the fifth day the pedicle had been nearly cut through by the ligature, and as it was very desirable to avoid the chance of the polypus putrefying *in situ*, the pedicle was then broken by twisting the tumour round. The tumour having been thus detached from its connexion, the difficulty remained, of how it was to be removed from the pelvis; it was found that it could not be extracted entire, even with instruments. Denman had advised that in such a case the tumour should be allowed



to remain until it softened down, but in the present case Drs. Cusack and Montgomery disapproved of such a course, lest, in consequence of the pressure on the soft parts, the vagina should slough, and an opening be made into the rectum. It was therefore resolved on to introduce hooks into the polypus, and excise large pieces of it; its bulk being in this manner reduced, it was drawn out. The further progress of the case presented nothing unusual; the recovery was complete.

The pedicle by which the polypus was attached to the uterus was very short, but its diameter exceeded an inch.

2. *Cirrhosis of the Liver.*—*Ascites.*—Mr. O’Ferrall said he had to lay before the Society a specimen of mammillated liver, and also the brain taken from the same subject, a patient fifty years of age, who was nearly moribund when brought to St. Vincent’s hospital. He had ascites and general dropsy, but no symptom of any cerebral affection. On the night after his admission he became comatose very suddenly, and without any premonitory symptom. Mr. O’Ferrall referred to some former instances of this condition which had come under his notice, and observed that, notwithstanding the hopelessness of the case, he considered it a duty to endeavour to restore the patient to a state of consciousness. The condition itself was one of great interest and deserving of attentive investigation; the symptoms of the patient in this state of coma were these: pulse at the wrist very rapid, and perhaps it might be described as compressible; in the temporal artery the pulse was bounding; the pupils were contracted; the respiration slow. He determined that arteriotomy should be performed. When from ten to twelve ounces of blood had been withdrawn the pulse improved, and then became weak. The head was now shaved, blisters applied to the scalp, and other appropriate means resorted to, with the result that the patient was restored to consciousness. In two or three days afterwards the coma returned, but very slowly, and in this state the patient sunk gradually and died. The brain was the first object of attention in the examination after death; it was very vascular, and was in a very slight degree softer than the brain of intemperate persons is usually found, which are generally firm. There was no effusion within the cranium; the ventricles were dry. The pia mater was very vascular, especially in the sulci between the convolutions. There was no other morbid appearance in the contents of the cranium. In the abdomen, besides the effusion into the peritoneum, it was observed that the liver was in the condition which Laennec designated cirrhosis, and which, he supposed, consisted in a deposition of foreign matter within the structure of the liver. This is the mammillated liver of some other pathologists; the small brown tubercles of Baillie. Cruveilhier considered this to consist in an hypertrophy of the yellow tissue of the acini. Hope referred it to an interstitial foreign deposit, along with hypertrophy of the acini, but this opinion appears to be ill founded. It would be observed in the present specimen, that the section showed an uneven surface, though less so than the exterior of the liver. On the surface



of the section are numerous projections ; these projections are soft and pulpy, but the general substance of the liver and its cellular matter are firmer. When the pressure of the cellular structure is taken off, these softer portions protrude, and a biliary fluid exudes from a central point in each ; this proves that the acini are hypertrophied, and the cellular structure indurated. Mr. O'F. having pointed out these appearances in the specimen, remarked that the disease was not infrequent, and that its intimate morbid structure was not sufficiently determined. In the body from which the specimen was taken, the lungs were found in a state of congestion, but during life there had been no symptom of the lungs being affected. The heart was very small, its texture soft and flaccid, and its parietes thin. On the contrary, in many cases of cirrhosis the heart had been soft and very large. In the present case the action of the heart was feeble, and this was explained by the condition of the organ.

4. *Contraction of left Auriculo-ventricular Opening.*—Dr. Bigger said, the specimen he had to present belonged to a case which offered many points of interest regarding the diseases of the heart, and its sounds, and which might, on that account, be considered valuable enough to justify him in laying them before the Society. The subject of the case was a young female, who, when she first came under his notice in August, 1840, was eighteen years of age. She complained at that time of frequent palpitations, and difficulty of breathing ; her countenance was anxious, and there was a remarkable blueness and lividity of the lips. The pulse at the wrist was 160. When the stethoscope was applied over the region of the heart, both sounds of the heart could be distinguished, and between them there was a bruit ; there was frottement audible over a considerable portion of the side of the thorax. She was treated for pericarditis, and recovered, but in a month these symptoms again recurred, but were less violent than on the first occasion ; she was again relieved by treatment. She had after this many similar attacks, complicated with erysipelas of the face, and occurring at the menstrual periods. She suffered from amenorrhœa. It was observed, that however treatment relieved her other symptoms, the bruit still continued, except when she was perfectly quiet. On the 4th of February, 1841, she again came under Dr. Bigger's notice. She had been previously in the Meath Hospital for erysipelas of the face ; she had now erysipelas affecting the entire of the head. On the 5th the pulse at the wrist was 70 ; there was a bruit de cuir ; the face was still swollen, but the heart symptoms were relieved : after this leeches were applied to the epigastrium, and digitalis exhibited internally ; the pulse at the wrist was synchronous with that of the heart ; there was a slight fremitus, and the impulse of the heart was indistinct. By the 12th the erysipelas had disappeared, and she was in every respect better. On the 1st December, 1842, there was a bruit de scie distinctly audible, the pulse at the wrist was 120, the face was anasarcaous, the dyspnoea was considerable ; the nose was of a purplish colour ; there was crepitus in the left lung, and other indications of

pneumonia. On the 14th she died. After death the body was examined; the right lung was solidified throughout, except a small layer next the surface, which was emphysematous, and through it were dispersed many spots of pulmonary apoplexy. In the apices of both lungs there was calcareous concretion, and the pleura was puckered over them. In the upper lobe of the left lung there was some purulent infiltration; the lower lobe was in a very peculiar condition, it was tough, very elastic, and in appearance resembled an emphysematous lung; there had been an exudation of organised lymph into its tissue. The heart was not very large, the auricles appeared to constitute the greater portion of it; they were very muscular, and distended with blood. The left ventricle was not much hypertrophied; the left auriculo-ventricular opening was funnel-shaped; the mitral valves were united together, leaving scarcely room for a goose quill to be passed through; the left auricle was hypertrophied. The aorta and its valves were normal. It was remarkable that in this case, the soufflet which was audible between the first and second sounds of the heart, was as well marked as in cases where the aortic valves are diseased. The result of Dr. Bigger's experience of cases of this nature was, that when the aortic valves were diseased, the soufflet accompanies the second sound; but that it is heard between the two sounds when the auriculo-ventricular opening is in a state of contraction.

*Ninth Meeting, January, 28, 1843.*

MR. O'FERRALL in the Chair.

1. *Fracture of the Neck of the Humerus, with Dislocation of the Head of the Bone into the Axilla.*—Mr. Robert W. Smith exhibited to the Society an example of an injury of rather rare occurrence, viz. : luxation of the head of the humerus, with fracture of its cervix; the former was dislocated downwards into the axilla, and the latter broken obliquely, about two inches below the head of the bone; the fragments had united with considerable overlapping and consequent deformity, and a new socket had been formed for the head of the bone, beneath the coracoid process, upon the subscapular surface of the scapula. Mr. Smith observed, that although the treatment of this injury was attended with great difficulties, the diagnosis was not generally so, as in simple luxation the arm is lengthened, but in this injury, when there exists any displacement of the fragments (which is almost always the case), the limb is shortened; it is further distinguished from the simple dislocation, by the head of the bone remaining motionless when the shaft of the bone is rotated, the elbow also can in general be brought close to the side. Mr. Smith observed that it was an injury almost necessarily followed by permanent deformity; the luxated head of the bone could not be reduced, for no extending force could be made to act upon it in consequence of the existence of the fracture of the cervix, and were the attempts to be made after the fracture had become sufficiently firmly united to admit of



extension being applied to the limb, it would most probably fail, in consequence of the adhesions formed around the dislocated head of the bone; it was, therefore, a matter of the greatest importance not to overlook the true nature of the injury at the time of its occurrence, that the patient might be made aware that the limb would be permanently deformed, and its motion, to a certain extent, impaired. Sir Astley Cooper, in the description which he has given of this injury in Guy's Hospital Reports, remarks, that it is usually the cause of blame being unjustly thrown upon the surgeon in attendance.

2. *Cirrhosis of the Liver.*—Mr. R. W. Smith said he wished also to present to the Society, a specimen of cirrhosis of the liver, on which he desired to make some observations. This disease of the liver was of frequent occurrence, many specimens of it had been communicated to the Society, and the pathology of it might be considered as now well understood. The opinions of Laennec as to its nature were not supported, nor were those of Cruveilhier completely admitted. It is now considered to consist in a peculiar contraction of the cellular tissue pervading the liver, the capsule of Glisson as it has been named. Mr. Smith regretted that he was unable at the last meeting to remain to hear Mr. O'Ferrall's communication, who had anticipated (as he had since been informed), almost all that he could have said on the subject. There remained, however, some points of consideration, to which he would ask the Society to attend. He had observed, that in all the cases which he had seen, the left lobe was always the part most affected, that appeared in the greatest degree atrophied in this disease. Why this should be the case, is as yet unknown. The tubercular lobulated appearance depended, as he had already observed, on the contraction and condensation of the cellular tissue, which was so characteristic of this disease; it would be observed that each of these lobules was only connected to the bulk of the organ by the vessels entering at its base. It would be recollected that Mr. Adams had communicated a specimen in which the lobulus Spigelii was retained in connexion by the vessels only. In the present specimen there were similar appearances, and it resembled closely Cruveilhier's plate illustrative of the isolation of the granules of the liver. Each lobule was easily divisible, and its divisions subdivisible into smaller, so that the whole might be unravelled into a racemiform structure, like that of the kidneys in the phocidæ and some other tribes. It had been observed that malignant diseases of the liver are not accompanied by dropsy, as this always is, because it interrupts the circulation. The cirrhotic liver does not admit of being freely injected. It was also to be remarked, that it is always accompanied by enlargement of the spleen, which, in many of these cases, becomes larger than the liver. Mr. Smith conceived these phenomena might throw light on the nature of the functions of the spleen. Müller had indeed given it as his opinion that the theory of the connexion between the spleen and liver was fallacious, but Mr. Smith thought that in this instance Magendie's opinion was to be preferred. He thought it extremely probable that the spleen



was a reservoir for blood. He had found in two cases where the spleen was greatly diminished in size and indurated, being almost cartilaginous, that the liver was enlarged in size, congested enormously, and universally hyperemic. In Dobson's and Magendie's experiments on living animals, blood had been injected into the veins after the abdomen was laid open, and it was observed that the spleen then became enlarged. On the other hand it was diminished in bulk by copious bleedings. All these circumstances tend to prove that the function of the spleen is connected with that of the liver, and with the process of sanguification.—(*Museum, Richmond Hospital.*)

3. *Lungs emphysematous, with Tubercles scattered through them; Apex of Heart formed by right Ventricle; Nutmeg Liver.*—Mr. O'Ferrall said the specimens which he then presented to the Society, belonged to a case which shewed how very difficult it sometimes is to form a correct diagnosis of phthisis, and which also exemplified several important points in pathology. The case was one of acute or rather subacute phthisis, combined with an emphysematous condition of the greater portion of the lungs, a complication exceedingly rare, and causing great difficulty in making the diagnosis. The subject was a young man of about twenty-eight years of age, who was brought into St. Vincent's Hospital, labouring under extreme difficulty of breathing; his countenance was livid and expressive of great anxiety, and the nares widely dilated; when he was stripped there was observed strong action of all the muscles accessory to respiration; the jugular veins were distended; the action of the heart could be felt under the sternum; under the right clavicle there was a slight degree of dulness, and through the lungs there were bronchial râles mixed with mucous and sibilant. Mr. O'Ferrall thought that there was a slight flattening of the thorax under the clavicle; the patient was in no way emaciated, but had rather a muscular appearance. The diagnosis formed was that the lungs were emphysematous, and the heart displaced. On the morning succeeding this examination he had hæmoptysis and increased dyspnoea. He died in ten days after his admission, but for the two or three days immediately previous to his death there was but a trace of blood in the sputa. When the thorax was laid open, it was found that both lungs were emphysematous, except a portion of the apex of the right lung; there were tubercles scattered through both lungs, but in greatest quantity in the left, yet the right lung was more solidified; there was a less amount of tubercle in the apex of the right lung than in the other parts. In the bases of both lungs were small cavities containing pus; in one of these there was a clot of blood. The heart was large, and its apex was formed by the right ventricle; the disease of the mitral valves, described by Mr. Adams, is usually accompanied by this condition. The large size and muscularity of this heart were remarkable. The liver was in the state called the nutmeg liver, and was a good specimen of the first stage of the hepatic venous congestion described by Mr. Kerin.

4. *Inflammation of the Base of the Brain; Ramollissement, and Change of Figure of left Optic Nerve.*—Dr. J. F. Duncan presented the brain of a woman who had been long an inmate of the North Union Workhouse. Previously to her admission, she had often suffered from intense headach, with which she was also several times attacked in the workhouse, and was two or three times in the hospital. On the 6th of December, 1842, she was again admitted into the workhouse hospital for the same affection, but there was no other indication of any disease of the brain. A chronic abscess, situated externally near the neck, had suppurated, and was opened. She appeared relieved, and left the hospital. On the 18th of January, 1843, she was again complaining, and on examination it was observed that there was a slight ptosis of the left eyelid; the countenance exhibited a stupid vacant stare; there was no febrile symptom; memory and consciousness were still perfect, but the sight was evidently failing. She had a sensation of sparks, and bright objects of different magnitudes floating before the eyes. She was very irritable, and had excessive vomiting. On the 19th the left pupil was dilated, the left angle of the mouth was drawn inwards, and the tongue drawn to the left side. On the 20th she was raving, with incessant, loud, incoherent discourse, and had frequent severe rigors. On the 22nd, there was, in addition to the previous symptoms, very quick and irregular pulse; before this, it had never exceeded 80 in the minute. On the 26th she got up out of bed three or four times without assistance, although there was slight paralysis of the left side. After returning to bed the last time, she fell into a comatose state, and died suddenly. When the skull was opened, it was found that there had been recent intense inflammation at the base of the brain; there was false membrane on the lower surface of the brain, extending from the commissure of the optic nerves to the cerebellum; both the optic nerves had been inflamed, the left was softened and flattened. A quantity of lymph, of a greenish colour, had been effused at the base of the brain. Dr. Duncan conceived that these appearances served to explain the symptoms of the case, as to failure of vision. The treatment adopted, he would observe, consisted in the application of counter-irritants, together with the internal use of calomel and active purgatives. The bowels were obstinately constipated all through the case, and of five blisters which were successively applied, the three last had failed to produce vesication.

5. *Observations on Dr. Bigger's Communication at the last Meeting.*—Dr. W. Stokes said, that with the consent of the Council of the Society, he would now proceed to submit to the consideration of the Meeting some observations in reference to a specimen which had been produced at the last Meeting, by Dr. Bigger. It was one of the advantages of that Society, that when an observer loses sight of a patient, he may afterwards learn the progress and final results of the case, from communications made to that Society by other members. It would be recollected that Dr. Bigger's specimen produced



at their last meeting, was one of diseased mitral valves, without the heart being hypertrophied, but with contraction of the right auriculo-ventricular opening. The case was one of great interest and value, not only to the pathologist, but to the practical physician, on account of the extreme difficulty of making a correct diagnosis of phenomena which, it should be borne in mind, *may be present either with or without the existence of organic disease*. The female who formed the subject of Dr. Bigger's communication, had been for some time in the Meath Hospital under the care of Dr. Stokes, who, after attentively investigating the symptoms, concluded on suspending his diagnosis; this he remarked at the time to Mr. Murney, one of the clinical clerks, who had taken very accurate notes of the case. To illustrate still further the difficulty of forming a diagnosis in cases of this kind, he would mention the case of a female, twenty years of age, full and well formed, whose catamenia were scanty, but regular in their periods, and the causes affecting which were not ascertained. She was liable to violent palpitations after exercise, and was obliged in consequence always to walk slowly. She was by no means hysterical, on the contrary she was remarkably strong-minded and intellectual; her lips were livid, and she had a tendency to swelling of the feet; what was, however, most curious in the case, was a loud musical murmur heard along with the second sound of the heart; the second sound itself was normal; the heart was not enlarged, and there was a similar sound audible in all the large arteries which could be examined; none could tell how long these symptoms had existed. This difficulty of diagnosis was felt even by Dr. Chambers, of London, with whose reputation they were all acquainted. He had received from that eminent physician a long letter, extending to eight pages closely written, relative to the case of a female patient of his, who was at first thought to be chlorotic, and of which, as it exemplified what he had been remarking, he would read some extracts to the Meeting. Having read out several portions of Dr. Chambers' letter, Dr. Stokes proceeded to observe: that it was in practice always difficult, in the case of young females, to determine whether these derangements of the heart's action are functional or structural; fortunately in the greater number of the cases which present this difficulty, the diagnosis is not essentially necessary. In some young females, a bruit is heard along with the first sound, but without any enlargement of the heart; this is more frequently observed in anemic individuals, than in the hysterical, or chlorotic. Of the merely functional murmur there are many variations, but these do not depend on any alteration in the force of the heart's action; but when the murmur is from organic causes, the variations which occur are found to be dependent on alterations in the force of the action of the heart. In most cases the bruit accompanies the first sound, the second sound is normal, and the musical bruit is also audible in the arteries; when these symptoms occur in a young female, we may diagnose that they are functional, or nervous, to use a common expression. The general



result of Dr. Chambers' cases was in favour of this, and the most successful treatment had been the long continued use of the iodide of iron. In Dr. Bigger's case this triple combination did not exist; there was no arterial murmur. The question remained to be elucidated, whether did this murmur in the arterial trunks arise from some spasm of the solids, or from some peculiar affection of the fluids? The same cause most probably produces murmurs in the arteries, as well as in the heart. It should be kept in mind that the second sound being normal, indicates that the valves are in the normal state.

*Tenth Meeting, 4th February, 1843.*

DR. LAW in the Chair.

1. *Ileus; Portion of small Intestine passing through an Opening in the Mesentery.*—Mr. Hamilton said the specimen he then presented to the Society, was one illustrative of the pathology of ileus. On last Wednesday he had been sent for to see a patient in Townsend-street, and on his arrival, found a man of about twenty years of age, suffering under an aggravated form of ileus. It had commenced about eight days previously, with pain in the abdomen, constipation, and vomiting; it did not at all yield to remedies. The patient was vomiting every minute a yellowish matter, which was not fæcal; the abdomen was swelled, but not tympanitic, the tongue was streaked, the pulse 118, and weak. He died on the tenth day from the commencement of the illness, during the entire of which period there was no dejection from the bowels. It was remarkable that during the last two days there was no pain in the belly, no tenderness on pressure, and on the day of his death the pulse had fallen to 96. Dr. Abercrombie has observed a similar absence of pain and quietness of the pulse in some of his cases. After death an examination of the body was made. The ileum and jejunum appeared distended, and in some parts were of six times the natural calibre, forming pouches, which contained fæces; these intestines were of a deep port wine colour. The stomach was healthy; the large intestines appeared smaller than was natural. In the lower part of the right side of the abdominal cavity was discovered the seat of the disease; there was there an aperture in the mesentery, through which a portion of the small intestines protruded; the intestine at that point was greatly contracted, and had all the characters of stricture; it was flattened, but was still pervious. Above the stricture was the distended vascular part of the canal, while below the intestines appeared healthy. The case was one of very rare occurrence.

2. *Injury of the Head; Death of the Bone; Softening of left Hemisphere; two Abscesses in the Substance of the right.*—Dr. Hutton presented the recent specimens, exhibiting great extent of disease in the brain, which had been but little indicated by symptoms

during life. The subject had been admitted into the Richmond Hospital, under Dr. Mac Donnell, on the 19th of December, 1842. He was a bricklayer, who was at work on an arch of brick, which had suddenly given way beneath him. In his fall with the ruins, he received a flap wound of the scalp; the occipito-frontalis and the periosteum were torn down, and formed a flap hanging over the right eye; the man was but little stunned, and after a short time he very foolishly cut away the flap. There were no very urgent symptoms when he was admitted into the hospital, and the shock to the system appeared to have been but slight. He went on well for some days, the sloughs were separating, and there were no symptoms of the brain having been injured; granulations formed from the margin of the wound; gradually the case began to assume an unfavourable aspect; there was no matter lodged under the scalp, but the wound began to look unhealthy, and more of the bone was laid bare. On the 15th of January he complained of pain in the interior of the head, and especially towards the occiput; his mind gradually became clouded, and in the course of a few days he had become quite stupid. There was no paralysis except of the sphincters; the fæces and urine were discharged involuntarily; the respiration was diaphragmatic. The stupidity increased to such a degree that he no longer replied to questions, though he could still speak distinctly; there was no strabismus until the last three or four days; the pulse was rarely above 90 at any period of the case; the body became greatly emaciated, and the skin was harsh and dry towards the conclusion of the case; he died on the 29th of January. The appearances observed in the examination after death were these: the scalp was detached from the right half of the frontal bone; the surface of the bone itself was yellow and cribriform; the coronal suture was separated, and the processes of indentation had been absorbed; the death of the bone had passed beyond the suture, both externally and internally; the dura mater presented the appearance usual in necrosis of both tables; it was rough, and had lymph deposited on it; there was subarachnoid effusion; the pia mater was injected, the substance of the left hemisphere was softened. At the base of the brain there was purulent lymph effused, particularly at the pons varolii, the medulla oblongata, and the optic nerves. When an incision was made into the right hemisphere, parallel to the longitudinal fissure, an abscess was discovered, situated immediately under or in the cortical substance; there was another abscess of a larger size contained in a sac, which communicated with the right ventricle; this sac was full of a tenacious matter, which had also passed into all the ventricles; their serous lining was inflamed, and layers of lymph could be raised from the serous surface; there were cysts in the choroid plexus, which had become vascular, and were covered with lymph: the thalami of the optic nerves, the corpus striatum, and the anterior lobes of the brain had also undergone a degree of ramollissement. It was remarkable that in this case there had been no convulsions,



and no paralysis except of the sphincters, and slight spasmodic contraction of the biceps.

3. *Malignant Ulceration of the lesser Curvature of the Stomach; Farre's Tubercle of the Liver; Chronic Arachnitis.*—Mr. O'Ferrall presented a specimen of malignant disease of the stomach, of Farre's tubercle of the liver, and of chronic arachnitis, all taken from the same subject. The liver in this case was unusually soft; along the lesser curvature of the stomach there was a track of ulceration where the mucous membrane had been destroyed, and the malignant deposition had taken place. In this case there had been black vomiting and singultus before death. The brain of the same subject exhibited the characters of chronic arachnitis. The subject from whom these specimens were taken was a man seventy-seven years of age, and was a person of very acute intellect; he related, when detailing his case, that when he was about seven years of age his head had been accidentally injured by being crushed between a mangle and the wall of the apartment; that he easily recovered, but that afterwards during boyhood and youth he was very excitable, and that up to his fiftieth year he had frequent paroxysms of excitement, for which he had often been cupped and had taken medicines, but from the age of fifty to his death at seventy-seven he had no symptom whatever of any affection of the encephalon. In the examination made after death when the dura mater was raised, the arachnoid was observed to be opaque; the characters of chronic arachnitis were observable; in some parts there were adhesions of the opposite surfaces of the arachnoid. This state was the same with that which Andral would designate *subarachnoid thickening and opacity*, but Mr. O'Ferrall considered it as attributable to the arachnoid itself, and not to any subjacent tissue. The arachnoid passing from one lobe of the cerebellum to another was opaque and thickened. The structure of the arachnoid is probably cellular, otherwise it would be difficult to understand how it could be nourished; its exterior surface is evidently cellular and flocculent, and it is impossible to separate this from the serous surface or layer. The present specimen shews the condition of parts which remains after chronic arachnitis, and the history of the case shews the curability of that inflammation by treatment, and the capability which the membrane possesses of undergoing extensive morbid lesions without any obvious derangement of function.

4. *Hypertrophy with Dilatation of the left Ventricle; Mitral Valves thickened.*—Doctor Law presented a specimen of hypertrophy with dilatation of the left ventricle, and disease of both the mitral and aortic valves. The subject, a woman aged twenty-five, was admitted into Sir Patrick Dun's Hospital for an affection of the chest, considered at first to be bronchitis, or bronchitis combined with phthisis. She had been twenty months nursing, had cough and night sweats; after she was some days in the hospital attention was drawn to the condition of the circulating organs; there was a double bruit audible behind the sternum, extended pulsation propagated into the arteries,



dulness to percussion in the præcordial region; the bruit could be also heard below the mammæ; the pulse was jarring and the pulsation in the arteries visible. The question was, did these symptoms depend on organic, or on functional disease? the diagnosis was of organic disease which was amply confirmed by the examination after death. It would be observed that the left ventricle was elongated in both its axes; the mitral valves were greatly thickened, so as to interfere with their functions. Dr. Law observed that what Dr. Stokes had mentioned at the last meeting as to the distinction between functional and organic disease of the heart, and the means of diagnosis, coincided with his own observations. He had observed that where the affection is merely functional, the bruit is confined to the first sound; and that disease of the mitral valves is not liable to be confounded with a functional affection, while disease of the aortic valves may; the diagnosis depends on the bruit heard with the first sound. In the chlorotic and anemic cases in which this occurs without any valvular disease, there is only a single bruit; but when the valves are diseased, the bruit is double. In some cases the second sound of the valves is not heard, in consequence of the patency not being permanent, and in these cases the dilatation is also less. There is, however, less chance of injury from confounding these affections, than from mistake in other cases. He might allude to a case of a female of very pallid appearance that had come under his notice; the bruit de diable was audible in the vessels of the neck, and the treatment with chalybeate remedies was very successful. Dr. Corrigan had related a case of a medical man who had been greatly injured by depletion, but who by change of air and other appropriate means, was enabled to survive for fourteen years. In that case the valves were much in the same state as in the present specimen. He would conclude with observing, that in chlorosis the blood is imperfect in its constitution; that in anemia it is deficient in quantity, which is less than is requisite for the due support of the body and the various secretions in a state of health; and that in cases where the valves are diseased the blood regurgitates into the ventricle. In all these cases there is a deficient supply of blood, and hence a somewhat similar treatment is applicable to all.

5. *Cancerous Deposition in the cervical Vertebrae*.—Dr. Bigger said it might be recollected, that on the 12th of February in the last year, he had laid before the Society a scirrhus breast, with two axillary glands, that had been removed by operation from a patient in the Adelaide Hospital by his colleague, Dr. Marks. He had now to present the spine of the same subject, whose case he would relate in explanation of the specimens. Mrs. M., aged forty-seven, married seventeen years, had borne six children, of whom four are still living; had nursed two of them, had suffered disease of the breast during six years previous to her admission into the hospital, where the amputation was performed, after which she left the hospital on the 8th of March, 1842. Up to the 20th of July she

appeared to be doing well, and had suffered no annoyance except from the cicatrices of the wounds made in the operation. The catamenia were regular, there was no hereditary predisposition to malignant disease, and strong hopes were entertained that the disease would not reappear. About this time she complained of a slight disposition to cough and dyspnoea, but there was no effusion into the thorax. In November she complained of pains like rheumatism in the lower extremities, then about the shoulders; their chief seat was referred to the back of the neck; tinglings in the fingers and symptoms of paralysis succeeded; sensation was diminished; the arms became affected with clonic spasms. The head next became affected, and for some days before death it could not be raised; the slightest motion rendered the pain in the neck intolerable. There was obstinate constipation and tympanitis of the abdomen. A seton was introduced in the back of the neck at the third cervical vertebra, and opiates and other remedies used as occasion required, but the disease was not to be subdued. She died in a fit into which she fell on the 18th of January. The body was examined after death; the spinal column was observed to be changed in figure; the atlas and second vertebræ were sound; the bodies of the three next vertebræ were changed into a scirrhus structure; the third occupied a very small space, the cancellated structure was softened, the cancelli had disappeared; the fourth vertebra was softened; the cancelli broken down, but it was not injured in its longitudinal axis; the fifth vertebra was shortened. On raising the spinal cord out of the canal, it was found to have been compressed. Outside the spine, immediately under the muscles, was a large mass of cancerous matter, intermixed with bony particles.

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*Foreign Body in the Air-passages.*—Doctor Houston communicated the following case to a late meeting of the Surgical Society of Ireland:—Dolly Kelly, a healthy country girl, æt. 16, recommended by Dr. Nicholson, of Rathdrum, was admitted into the City of Dublin Hospital, March 15, 1841. About a month before admission, while holding a piece of stick in her mouth, she laughed suddenly at some observation made by a companion, when the stick passed backwards, and she was seized instantly with a severe fit of coughing, which lasted for upwards of an hour. She thought she had swallowed it, and had a feeling as if it was sticking in the upper part of the throat. Pressure there caused pain. She soon became a little hoarse, and had repeated fits of coughing, which were brought on especially by stooping or turning her body much to one side. For a week, symptoms continued much in this state, but she told no one of what had happened, expecting to cough up the foreign body. At the expiration of this time the sensation of pain had ceased to be felt high up, and was now complained of as existing at the upper part of the sternum, leading her to think that the body had passed further downwards. Now, too, for



the first time her expectoration was streaked with blood. Her voice, during the second week, became quite inaudible from hoarseness. By a liniment and some medicines, the hoarseness was removed. A probang and an emetic satisfied her medical attendants that the foreign body was not located either in the pharynx or œsophagus.

When questioned regarding the piece of wood, she described it as having been about an inch long, very hard and black, about the thickness of a straw, and with a head flattened sideways. She could give no further account of it than that she had found it on the floor, and not knowing either its name or its use, never having seen the like before, she put it into her mouth as a safe and ready place of keeping, until she could make inquiry about it; and while thus held in her mouth, the accident, as above described, happened.

*Symptoms on Admission into Hospital.*—Voice feeble and hoarse, very hoarse on attempting to speak loud, but clear and silvery when speaking low; cough frequent, and sometimes attended with pain, as if from a pin sticking in the throat. This pain is produced also by suddenly turning the head to one side or stooping; but there is no pain on pressure anywhere in the neck. She gets fits of coughing in bed, at night, much more distressing than those which come on in the daytime, and accompanied with a croup in inspiration. Tracheal râles, rough, sibilous, and mucous, and the slightest effort produces much aggravation of intensity in these sounds; the chest clear on percussion, and equally so on both sides; the respiratory murmur scarcely audible from loudness of tracheal sounds; however, when the breathing is easy, both mucous and sonorous râles are audible on both sides, and without an appreciable difference in degree in one side as compared with the other. Stooping, conversing, or anything that hurries the respiration, brings on paroxysms of croupy cough, during which respiration is suspended, the face flushed, the eyes suffused with tears, and the veins of the neck distended. Suffocation then appears imminent; and yet all this distress is at once relieved by swallowing a sup of any liquid—the mode of relief she always flies to in such emergency.

The girl is healthy in every other respect, and has never had hysterical or other nervous symptoms.

Her story is so clear and circumstantial that there can be no doubt of its candour and veracity.

May 19th, I performed the operation of tracheotomy, regarding which it is unnecessary for me here to state further, than that having arrived at, and laid bare the trachea, I lifted up the forepart of that tube by means of a tenaculum stuck into it, and cut out a square piece, of the breadth of two rings, with a pair of strong scissors. The act did not occupy a minute of time.

A violent struggle in respiration attended on this proceeding, and on the instant of its completion, a gush of frothy mucus, tinged with blood, was expectorated with force from the wound and at the mouth, but no stick presented itself in either direction. After two or three fits of coughing of this kind, the breathing became more than usually



calm and free ; so much so, indeed, that the patient felt assured that the offending body had been got rid of in some way. A flexible metallic sound was introduced into the wound, and pushed thence upwards through the rima glottidis, and downwards, as far as it would go, towards the lungs, and turned and moved in different ways, so as, if possible, to detect by the touch the piece of wood ; but nothing of the kind could anywhere be felt. In the course of the evening a similar examination was again made with a gum-elastic bougie, but with no better result. There was still some cough, but the fits were neither so prolonged nor so severe. It was a subject of remark by all present, that in the introduction of these sounding instruments, there was a complete absence of excitement when they were pushed forwards through the larynx, whereas violent paroxysms of coughing were produced by every attempt at pushing them in the opposite direction, and this to such a degree, that had the discovery of the foreign body in the bronchial tubes rendered justifiable or necessary the introduction of a forceps for its extraction, the attempt must, from this circumstance, have failed. The wound was then simply protected by a piece of lint laid loosely on it.

20th. A good deal of irritative cough ; little fever ; no dyspnœa.

21st. Slept well ; tracheal râles still present, but less marked ; some mucous expectoration ; but no feeling whatever of the presence of the foreign body.

22nd. Wound suppurating and still open.

28th. Little cough ; orifice of wound closing ; all the expectoration comes through the mouth.

30th. Feels quite relieved of all the symptoms ; wound nearly closed.

July 4th (15th day). All the symptoms revived, and even worse than they had been since admission into hospital, the consequence of exposure to cold while sitting to a late hour in the garden, yesterday evening. The symptoms, now, are more like those of laryngitis than of inflammation of the trachea, so much so, that some of the medical gentlemen in consultation feel disposed to regard the affection as one which now is, and, from the first, had been one of laryngitis, simply.

Acting on this presumption, and to give the girl the chance of being bettered by a course of treatment applicable to laryngitis, she had leeches applied to the throat, and was mercurialised, and blistered.

12th. All well again ; the voice clear, but the breathing and cough raucous.

15th. Again, during a fit of laughter, the patient was on the instant attacked with a paroxysm of coughing, which lasted for about half an hour, and during which the expectoration was pretty abundant, and streaked with blood.

24th. No bad effects remaining from the attack of yesterday ; wound quite healed.

August 2nd. Has recovered her voice, is free from cough, pain, or abnormal râles of any kind, and feels nearly as well as she was be-

fore the accident. Being myself about to leave home for a short time, and seeing no present object to be gained by detaining the girl in hospital, I permitted her to return to the country, acquainting my friend Dr. Nicholson, at the same time, of all the circumstances of the case, and requesting of him to inform me of the issue of it. The result has been, the transmission to me, by him, of the piece of wood, of which the annexed woodcut is an exact *fac simile*, and which the poor girl threw up during a fit of coughing, in which she was nearly suffocated, in about three weeks after her return to the country. It is the peg of a child's fiddle, perfect and unbroken, and corresponding accurately to the form of the stick, as described by the girl when giving an account of the accident which had happened to her.



After the expectoration of the offending body, all pectoral distress ceased, and the girl regained her wonted health and strength.

*Observations.*—The diagnosis in this case, although embarrassed by the want of accurate information regarding the size and form of the piece of wood, was nevertheless sufficiently obvious to justify the attempt at relief by operation.

The healthy condition of the girl; her assurance of having, as she thought, swallowed a piece of stick, of which she gave a very accurate description; the fits of coughing and dyspnœa which supervened on the instant of the accident; the tinging of the sputa with blood; the hoarseness; the presence of mucous and sibilous râles in the trachea; the obtuse pain opposite the cartilage of the second rib; the stings of pain felt in certain movements of the neck and back; and the persistency of these distressing symptoms, ever since their first aggression, together with the assurances derived from pressure and the use of the probang and emetics, that the foreign body was not located in the pharynx or œsophagus—all left little room for doubt that it had passed from the mouth into the windpipe, carried by the air, inspired with suddenness and force, during the fit of laughter to which she had traced her sufferings.

It was the history and general symptoms of the case that led to such a conclusion, rather than the signs furnished by auscultation and percussion, which latter, it will be observed, were only those indicative of thickening, with morbid secretions and occasional spasm of some part of the lining membrane of the tube—viz., mucous râles, with stridulous, croupy breathing. The most detailed and patient examination could not detect any difference in the amount or character of the vesicular murmur in one lung, as compared with that in the other.

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*Cases of Poisoning by *Ænanthe Crocata*, by P. Bossey, Esq.*—Twenty-one convicts were employed, on the 4th February, 1843, at the mortar-mill situated on the banks of a canal in the Royal Arsenal at Woolwich. At 11 o'clock in the forenoon eight or ten of them went round the building to an adjacent pond of water, in order to



wash their spades and boots. One man (Chamberlaine) strayed away from the rest, and found this plant growing near the brink of the canal, the leaves and roots of which he mistook for celery. He dug up some, washed, tasted, and conveyed it to his companions. Several of the men returned to the spot, assisted him to obtain more of the roots, ate them freely, and distributed portions among their fellow-workmen who remained within the building.

At twenty minutes past eleven, under the direction of the keeper, they were all about to fall into ranks for the purpose of returning on board-ship to dinner (most of them still eating and putting roots into their pockets), when one (Wilkinson) without any apparent warning, fell down in strong convulsions. The struggling was soon over; he became better, but retained a wild expression in the countenance, which was pale, and in a short time he had another fit. Whilst they laid him upon a shutter, a second individual fell (Knight), and before they reached the yard adjoining the hulk, a third (Wilson), and a fourth (Salt) had also fallen, and were convulsed.

I arrived to give assistance about a quarter before twelve o'clock. Nine stout young men were at this time convulsed and insensible. The three worst, Wilkinson, Knight, and Wilson, were lying in a shed; Chamberlaine, Gundle, and Jeffs, had just fallen in the yard; and Williams, Jones, and Salt, were struggling on the deck of the vessel.

It was manifest that Wilkinson was dying. His bloated livid face, the sanguineous foam about the mouth and nostrils, the stertorous snort and convulsive breathing, and the extreme prostration and insensibility, plainly indicated that every remedial measure would be useless. Nothing was done but to raise the head and shoulders, and he died in five minutes.

Knight had been strongly and repeatedly convulsed, and appeared to be fast hastening into the same apoplectic condition. He was insensible, speechless, the pupils dilated, the face swollen and livid, the breathing laboured, and the limbs convulsed. To make him swallow was impossible; the rigid jaws were therefore forced asunder, and, by means of the stomach-pump, warm water was abundantly introduced and withdrawn from the stomach. Some leaves were extracted with the fluids, but the instrument was worked with the greatest difficulty, owing to the severity of the convulsions. He died in a quarter of an hour.

Wilson had assisted to carry the two former: when near the yard he was observed to look pale, and soon fell convulsed. He struggled so violently that several strong men could scarcely hold him. After the fit he was restless; consciousness partly returned; he answered "yes" when his name was loudly called, and swallowed an emetic solution of sulphate of copper. No vomiting was induced, the convulsions were renewed; the stomach-pump was passed, but extracted only fluids. A collapse threatening immediate dissolution followed; his strength was gone, face pale, pupils dilated, breathing convulsive, and he appeared dying. After some time the stomach-pump was again employed, and small portions of the root, with a few leaves,



withdrawn. Convulsions returned, with strong struggling, and about half-past twelve o'clock, in a fit, he suddenly died.

Emetics of salt and mustard, with warm water, were administered to those who had fallen in the yard, under which they vomited freely, and discharged a large quantity of imperfectly masticated root, and were thereby greatly relieved. The convulsions ceased, sensation and reason were restored, but there remained giddiness, pallor of the face, dilated pupils, coldness of the extremities, much weakness, severe rigors, and a slow feeble pulse. Further vomiting was promoted, and more of the root discharged. Friction and warmth were applied to the extremities, whilst ammonia and rum, with thin gruel and other drinks, were administered internally, till reaction was more fully established.

Emetic doses of the sulphates of zinc and copper, and also mustard and water, were given without effect to the patients lying on the deck of the vessel. They were also bled very largely, both from the arms and jugular veins. The introduction into, and removal of warm water from the stomach, by the pump, brought away small portions of the noxious roots. Cold affusion upon the head, perseveringly used, lessened the struggling, and produced some exhaustion. In three cases (Salt, Williams, and Burgess), the subsequent fits became less violent; they passed into a state of maniacal delirium, with much jactitation of the limbs, and, after some hours, were removed into the hospital. But in one more patient (Jones), all these remedies were ineffectual; he died convulsed at a quarter before one o'clock. As a last effort, the trachea was carefully opened by an incision, and artificial respiration kept up, but life was quite extinct.

Several of the men who had eaten the root, seeing the others suffer, took the salt-water emetic with success, and had no symptoms of being poisoned; others felt giddiness and faintness in a slight degree, and at 6, P. M. there were, upon examination, eleven who required watching, and were, therefore, sent into hospital. . . . .

One young man, Joseph Salt, ætat. 17, was bled largely the first day, but during his subsequent illness, the extremely irritable condition of the nervous system, and the severe bronchitis, prohibited active depletion.

The post-mortem inspection shewed that many important organs were very seriously injured.

The trachea and bronchi were injected, and the smaller bronchi filled with mucus. The left pleura was lined with lymph, and its cavity filled with serous effusion. The stomach and intestines were pink on their external surface, the intestines glued together by adhesive matter; and there was much peritoneal effusion, with flakes of adhesive lymph. The mucous membrane of the stomach and bowels was softened, thickened, and everywhere coated with an abundance of mucus. On washing this off, the membrane was much injected. There vessels of the brain were more injected than usual, and there was slight serous effusion beneath the arachnoid. . . . .

[We have no room for the cases and post-mortem examinations, which are given at length].

From what has been related, it appears that the effects which the *œnanthe* produced in these cases were a violent irritation of the mucous membrane of the œsophagus and stomach, more particularly of the follicular structures, and a state of severe and universal spasm of the muscular tissues; it also induced insensibility, coma, delirium, extreme congestions of internal organs, and, in those cases immediately fatal, it occasioned permanent fluidity of the blood.

The first indication of treatment was, doubtless, to evacuate the stomach; but, as its sensibility was destroyed, and the poison was taken in the solid form, this could not readily be accomplished. Large and immediate depletion seemed to be essentially useful, by removing the imminent danger of extravasation from over-distention of the vessels; the cold affusion was also beneficial in rousing the patient, so as to make him sensible to the emetics, and so were purgatives during the after-treatment.

Called thus in a moment to so many urgent cases of poisoning, it became needful to use such remedies as were at hand; but, upon reflection, it seems to me proper, in similar circumstances, to rely chiefly on emetics given early, on large blood-letting *immediately* employed, and the cold affusion.

Although the attempt to re-establish respiration by tracheotomy failed in the case selected for it, in consequence, probably, of the great effusion of blood afterwards found on both hemispheres of the brain, yet it is worthy of a future trial in single cases, where it can be more conveniently practised.

Considering the great activity of this poison, that it is capable, as we have seen, of extinguishing the life of a strong young man, in full health, in *one hour*, and that many other fatal cases are recorded, it is rather singular that the nature of the active principle of the *œnanthe* is not yet well known, or the plant applied to medicinal use.—*Medical Gazette*.

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